



PUBLIC NOTICE

**AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT
AND NOTICE OF PUBLIC HEARING**

PROJECT INFORMATION		PUBLIC HEARING INFORMATION	
Project Title:	San Francisco Housing Element 2022 Update	Hearing Date:	June 9, 2022
Project Address:	Multiple	Time:	1 p.m. or later
Case No.:	2019-016230ENV	Location:	Remote or in-person hearing (see below and visit https://sfplanning.org/planning-commission for details)
Block/Lot No.:	Multiple	Case Type:	Environmental (Draft EIR)
Zoning District(s):	Multiple Use Districts Multiple Height and Bulk Districts	Hearing Body:	Planning Commission
Neighborhood:	Multiple		
Project Sponsor:	San Francisco Planning Commission, Maia Small, 628.652.7373		
EIR Coordinator:	Elizabeth White – 628.652.7557 CPC.HousingElementUpdateEIR@sfgov.org		

The San Francisco Planning Department (San Francisco Planning) has studied this proposed project’s potential physical environmental effects and welcomes your comments on the adequacy of the draft environmental impact report (EIR). Refer to the Proposed Project and Purpose of Notice sections below for more information.

Proposed Project

A Draft EIR has been prepared by San Francisco Planning in connection with this project as required by the California Environmental Quality Act (CEQA) to study the project’s potential physical environmental effects.

The San Francisco Planning Commission (project sponsor) proposes to update the 2014 housing element (existing 2014 housing element) of the San Francisco General Plan (general plan). The EIR evaluates the reasonably foreseeable environmental effects associated with adoption and implementation of the San Francisco Housing Element 2022 Update (proposed project or housing element update). The housing element update is mandated by state law, Government Code section 65583.

The housing element update establishes goals, policies, and actions required to plan for the regional housing targets allocated to San Francisco by regional agencies for 2023–2031 and meet future housing demand in San Francisco. The housing element update includes policies designed to improve housing affordability and advance

racial and social equity in accordance with the directives from the San Francisco Planning Commission and Historic Preservation Commission in summer 2020.¹

The housing element update would not implement specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure).² As such, the proposed project would not result in any direct physical changes to the environment, but would result in reasonably foreseeable changes. Specifically, San Francisco Planning assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and to modify density controls in low-density areas that are primarily located on the west and north sides of the city, designation of housing sustainability districts, and approval of development projects consistent with the goals, policies, and actions of the housing element update.

In accordance with CEQA Guidelines section 15064(d), the EIR identifies reasonably foreseeable environmental impacts that could occur as a result of future actions that would implement the proposed project. Under the proposed project, San Francisco Planning projects that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted as compared with the development anticipated under the existing 2014 housing element.

More information on the housing element update is available here: <https://www.sfhousingelement.org/>.

Draft EIR: The Draft EIR finds that future development consistent with the housing element update would lead to significant and unavoidable impacts, even with implementation of mitigation measures, for the following topics: cultural resources (project-level and cumulative: built-environment historic resources), transportation and circulation (project-level and cumulative: transit delay and loading), noise and vibration (project-level: construction noise, operational noise; cumulative: construction noise), air quality (project-level: criteria pollutants; project-level and cumulative: exposure of sensitive receptors to substantial levels of fine particulate matter and toxic air contaminants), wind, shadow, and utilities and service systems (wastewater facilities). Significant impacts would remain significant and unavoidable where mitigation is not feasible for the following topics: transportation and circulation (project-level and cumulative: construction) and utilities and service systems (water supply).

The Draft EIR provides a detailed project description, an analysis of the physical environmental effects of the proposed project, and identifies feasible mitigation measures and alternatives that would avoid or lessen the severity of impacts. The Draft EIR is available for public review and comment on the San Francisco Planning's website at sfplanning.org/sfceqadocs and at the San Francisco Permit Center, 49 South Van Ness Avenue, 2nd Floor, San Francisco, CA 94103. Paper copies and electronic copies (on a flash drive) of the Draft EIR are available upon request to the project planner. Referenced materials are available through the following San Francisco Planning's websites: sfplanning.org/sfceqadocs and sfplanning.org/resource/permits-my-neighborhood.

Projects on State Hazardous Materials Lists

As required by CEQA Guidelines section 15087(c)(6), the following information is provided because future development consistent with the housing element update could occur on site(s) identified on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5 or at otherwise contaminated

¹ San Francisco Planning Commission Resolution No. 20738, https://sfplanning.org/sites/default/files/documents/admin/R-20738_Centering_Planning_on_Racial_and_Social_Equity.pdf, June 11, 2020 and Historic Preservation Commission Resolution No. 1127, https://sfplanning.org/sites/default/files/documents/admin/R-1127_HPC_Equity_Resolution.pdf, July 15, 2020.

² Any changes to existing land use controls would require related legislative processes including review and public hearings before the San Francisco Planning Commission and/or the San Francisco Board of Supervisors. Approval of housing development or infrastructure would require development applications and approval. The EIR analyzes the secondary physical environmental impacts that could occur as a result of the housing element update.

sites. The detailed list of properties and their regulatory identification numbers are available at sfplanning.org/sfceqadocs, or by contacting CPC.HousingElementUpdateEIR@sfgov.org.

Purpose of Notice

You are not required to take any action. If you wish to comment on the adequacy of the Draft EIR, you may do so in either or both of the following ways:

WRITTEN COMMENTS	COMMENTS AT THE PUBLIC HEARING
<p><i>Planner:</i> Elizabeth White, EIR Coordinator <i>Via Mail:</i> 49 South Van Ness Ave, Suite 1400 San Francisco, CA 94103 <i>Via Email:</i> CPC.HousingElementUpdateEIR@sfgov.org</p>	<p><i>Live Stream:</i> https://sfgovtv.org/planning, or live on Cable Channel 78</p>
<p>From April 20, 2022, to 5 p.m. on June 20, 2022</p>	<p>June 9, 2022, at 1 p.m. or later Due to the COVID-19 emergency, this hearing may occur in person at San Francisco City Hall or remotely using videoconferencing technology.</p>
	<p>Language Assistance: To request an interpreter during the hearing, please contact the Commission Secretary at (628) 652-7589, or commissions.secretary@sfgov.org at least 48 hours in advance of the hearing</p>

The purpose of the public hearing is for the San Francisco Planning Commission and San Francisco Planning staff to receive comments on the adequacy and accuracy of the Draft EIR. The commission will not respond to any of the comments or take action on the proposed project at this hearing. Certification of the Final EIR will be considered at a later hearing. Additional information may be found on San Francisco Planning’s website or by contacting the EIR coordinator listed above.

General Information about Procedures

Members of the public are not required to provide personal identifying information when they communicate with the San Francisco Planning Commission or staff. All written or oral communications, including submitted personal contact information, may be made available to the public for inspection and copying upon request and may appear on the San Francisco Planning’s website or in other public documents.

Only commenters on the Draft EIR will be permitted to file an appeal of the certification of the Final EIR to the Board of Supervisors.

At the close of the public review period, San Francisco Planning will prepare a responses to comments document to respond to all comments on the Draft EIR presented at the public hearing and received in writing during the public review period. This responses to comments document and all other associated documents will be made available at sfplanning.org/sfceqadocs.

This notice is being issued during the suspension of certain CEQA posting requirements pursuant to San Francisco Administrative Code Chapter 31 requirements. This notice complies with local requirements under the March 23, 2020, Fifth Supplement to the Mayoral Proclamation Declaring the Existence of a Local Emergency dated February 25, 2020.

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DRAFT ENVIRONMENTAL IMPACT REPORT **VOLUME I**

San Francisco Housing Element 2022 Update

PLANNING DEPARTMENT
CASE NO. 2019-016230ENV

STATE CLEARINGHOUSE NO. 2021060358

Draft EIR Publication Date:	April 20, 2022
Draft EIR Public Hearing Date:	June 9, 2022
Draft EIR Public Comment Period:	April 20, 2022 – June 20, 2022

ENVIRONMENTAL PLANNING | SAN FRANCISCO PLANNING DEPARTMENT

Written comments should be sent to:

Elizabeth White, Senior Environmental Planner | 49 South Van Ness Avenue, Suite 1400 | San Francisco, CA 94103
or CPC.HousingElementUpdateEIR@sfgov.org

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List of Acronyms and Abbreviations

2020 plan	2020 Urban Water Management Plan
ABAG	Association of Bay Area Governments
AC Transit	Alameda-Contra Costa Transit District
ACWD	Alameda County Water District
ADA	Americans with Disabilities Act
ADU	accessory dwelling unit
AFFH	Affirmatively Furthering Fair Housing
BARR	Bay Area Regional Reliability
BART	Bay Area Rapid Transit
Bay-Delta Plan Amendment	amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary
Better Streets Plan	San Francisco Better Streets Plan
BMPs	best management practices
CA MUTCD	California Manual on Uniform Traffic Control Devices
CALGreen	California Green Building Standards Code
California register	California Register of Historical Resources
CCR	California Code of Regulations
CCWD	Contra Costa Water District
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
city	City and County of San Francisco
CNEL	community noise equivalent level
dB	decibel
dBA	A-weighted decibel
department	San Francisco Planning Department
DLOP	Driveway and Loading Operations Plan
DTR	downtown residential
EBMUD	East Bay Municipal Utility District
ERO	environmental review officer
EIR	environmental impact report
fire department	San Francisco Fire Department
FTA	Federal Transit Administration
FTA Manual	Transit Noise and Vibration Impact Assessment Manual
general plan	San Francisco General Plan
GHG	greenhouse gas
HABS	Historic American Building Survey
HALS	Historic American Landscape Survey

HCD	California Department of Housing and Community Development
housing element update or proposed action	San Francisco Housing Element 2022 Update
HVAC	building heating, ventilation, and air-conditioning
I	Interstate
in/sec	inches per second
L _{dn}	day-night level
L _{eq}	equivalent sound level
L _{max}	maximum sound level
L _n	exceedance level
LSM	less than significant with mitigation
LTS	less than significant
mgd	million gallons per day
MTC	Metropolitan Transportation Commission
Muni	San Francisco Municipal Railway
national register	National Register of Historic Places
NC	Neighborhood Commercial
NI	no impact
NOP	Notice of Preparation
NPS	National Park Service
OSHA	Occupational Health and Safety Administration
PG&E	Pacific Gas & Electric
planning code	San Francisco Planning Code
planning commission	San Francisco Planning Commission
police department	San Francisco Police Department
port	Port of San Francisco
PPV	peak particle velocity
PRC	Public Resources Code
public works	San Francisco Public Works
RH	Residential Housing
RHNA	Regional Housing Needs Allocation
RM	Residential Mixed
RPP	Residential Permit Parking
SamTrans	San Mateo County Transit District
SB	Senate Bill
SDAT	Streetscape Design Advisory Team

secretary's standards	Secretary of the Interior's Standards for Rehabilitation
SF Survey	San Francisco Cultural Resources Survey
SF-CHAMP	San Francisco Chained Activity Modeling Process
SFMTA	San Francisco Municipal Transportation Agency
SFMTA blue book	San Francisco Regulations for Working in San Francisco Streets
SFRPD	San Francisco Recreation & Parks Department
SFPUC	San Francisco Public Utilities Commission
SFUSD	San Francisco Unified School District
SoMa	South of Market
SR	State Route
state water board	State Water Resources Control Board
SU	Significant and Unavoidable
SUM	Significant and Unavoidable with Mitigation
TAZ	transportation analysis zone
TDM	transportation demand management
TDMP	Transportation Demand Management Program
TJPA	Transbay Joint Powers Authority
TNC	transportation network company
USD	Union Sanitary District
UWMP	Urban Water Management Plan
VdB	vibration velocity level or vibration decibel level
VMT	vehicle miles traveled
WDR	waste discharge requirements
WETA	Water Emergency Transportation Authority

GLOSSARY

2050 environmental baseline: The 2050 projected growth under the existing 2014 housing element.

AERMOD: U.S. EPA's preferred or recommended steady state air dispersion plume model.

Ambient Noise: The lowest sound level repeating itself during a 10-minute (minimum) period.

Anthropogenic: Caused by human activity.

Archeological Sensitivity: The assessed potential for past land uses to have resulted in archeological features or deposits that may be considered archeological resources, and the potential for such resources to have survived subsequent development.

Area Plans: Comprehensive policy visions that guide the development and evolution of specific neighborhoods. These efforts, which are generally adopted as part of a city's general plan, make changes to zoning and design policies, account for needed infrastructure improvements, and establish financial and implementation frameworks.

Accessory Dwelling Units: Also known as secondary units, in-law units, cottages, or granny flats, are units added to existing residential buildings.

Before Present: An archeological dating convention that is based on radiocarbon dating.

Biochemical Oxygen Demand Load: A measure of the amount of oxygen required to remove organic waste matter from water in the process of decomposition by aerobic bacteria. Increased biochemical oxygen demand load places more strain on aerobic digestion systems.

Blackwater: As wastewater containing bodily or other biological wastes, as from toilets, dishwashers, kitchen sinks, and utility sinks.

Brackish Groundwater: Groundwater with a high salinity or total dissolved solids content.

Carbon Dioxide Equivalents: A weighted average, based on the heat absorption of various GHGs (or "global warming") potential.

Carcinogenic: Indicates that scientific studies have shown that exposure to a substance or mixture of substances at certain levels for some period of time has the potential to promote the formation of cancer.

Collector Streets: Relatively low vehicle capacity streets serving local distribution functions primarily in large, low-density areas, connecting to major and secondary arterials.

Community Stabilization Initiative: A multi-agency effort that seeks to mitigate the impacts of ongoing displacement and help vulnerable populations thrive and contribute to the city's economy and culture.

ConnectSF: A multi-agency process to build an effective, equitable, and sustainable transportation system for San Francisco's future. ConnectSF will identify potential transportation infrastructure investments and policies needed to meet the city's continued growth equitably and sustainably over the next 30 to 50 years.

Daylighting: The removal of vehicular parking near intersections and crosswalks (i.e., red zones) to improve sightline distance and visibility for people walking, bicycling, and driving.

Enhanced Transit Signal Priority: Refers to the San Francisco Municipal Transportation Agency's Train Control Upgrade Project. A key feature of this project is to modernize the train controls within the subways and on the surface for light rail routes to allow for additional travel time savings at intersections compared to transit signal priority features in 2020 conditions.

Entrained Road Dust: Emissions of particulate matter from resuspended road surface material affected by the motion of vehicular travel on paved roads.

Existing 2014 Housing Element: Refers to the adopted 2014 housing element.

Floating Zone: A parking or loading zone that is moved away from the curb and into the street to allow a bicycle lane against the curb. Drivers use the parking spaces or loading zone just as they would at any other curb location. Drivers may not park or drive within the bicycle lane.

Fugitive Dust: Dust generated during construction that escapes from a construction site.

Greenfield Site: Refers to agricultural or forest land or an undeveloped site earmarked for commercial, residential, or industrial projects.

Historic Period: In San Francisco, this period is considered to begin with the arrival of the first Spanish explorers and settlers in 1769. This period is also referred to as the historic era.

Households: Refers to housing units that are occupied.

Landmark Trees: Designated by the board of supervisors for their environmental, cultural, historical, botanical, or other value.

Late Holocene: The current geological epoch.

Leading Pedestrian Interval: A signal phase at signalized intersections that typically provides pedestrians a three- to five-second head start when entering an intersection with a corresponding green signal in the same direction of travel.

Less than Significant with Mitigation: An impact that is reduced to a less-than-significant level through implementation of identified mitigation measures.

Less than Significant: An impact that would not involve an adverse physical change to the environment, would not exceed the defined significance criteria, or would be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations.

Light pollution: Brightening of the night sky caused by street lights and other human-made sources, which has a disruptive effect on natural cycles and inhibits the observation of stars and planets.

Major Arterials: Crosstown thoroughfares whose primary function is to link districts within the city and to distribute traffic from and to the freeways.

Major Transit Stop: Defined in CEQA section 21064.3 as a 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 intervals of 15 minutes or less during the morning and afternoon peak commute periods.

Marginal Nonattainment Areas: Refers to those areas where the fourth-highest reading over any 24-hour period in the past three years exceeds the eight-hour national ambient air quality standard for ozone, with concentrations between 0.076 and 0.086 ppm.

Nature-Based Solutions: Remove remaining emissions from the atmosphere by storing them in natural systems that support soil fertility or employing other carbon farming practices.

No Impact: No adverse changes (or impacts) on the environment are expected.

Paleosols: Soils that form on the surface while a particular geologic formation (e.g., a dune) is exposed and then later buried by sands, silt, or other natural deposits.

Person Trip: A trip made by one person by any means of transportation (auto, transit, walking, etc.).

Phase I Investigation: Uses existing information to assess a site's condition by examining current and historical uses of the site while determining potential threats to human health or the environment.

Phase II Investigation: Generally recommended if the Phase I investigation results reveal known or potential contamination. A Phase II involves sampling to evaluate the potential presence of contamination and determines the sources and magnitude of impacts.

Pipeline Projects: Projects currently under construction, projects that have approved building permits, projects that have building department applications on file, projects that have been approved by the department, and projects that have department applications on file.

Planning-Level Decision: Enactment of an amendment of a general plan or any general plan element, community plan, specific plan, or zoning code.

Pork Chops: Small pedestrian islands that channelize turning vehicles at intersections.

Priority Production Areas: Locally identified places for growth in middle-wage jobs in areas such as manufacturing, logistics, or other trades. An area must be zoned for industrial use or have a predominantly industrial use to be a priority production area.

Public Property: A property leased or owned by a government entity to which the public or a substantial group of persons has access. This includes, but is not limited to, any street, highway, parking lot, plaza, transportation facility, school, place of amusement, park, or playground.

Radiance Unit: The measure of the light emitted, reflected, transmitted by a surface lighting that received by the visible infrared imaging radiometer suite instrumentation looking at that surface from satellite orbit.

Recreational Streets: A special category of street whose major function is to provide for slow pleasure drives and use by people bicycling and walking.

Renewables Portfolio Standard: One of California's key programs for promoting renewable energy use in the state.

Secondary Arterials: Primarily intra-area routes of varying traffic capacity serving as collectors for the major arterials, and in some cases supplemental to the major arterial system.

Service Headway: The number of minutes between buses or trains on a particular bus route or light rail line.

Shadow-Foot-Hour: One hour of shade on 1 square foot of ground.

Short-Lived Climate Pollutants: Pollutants with relatively short atmospheric lifetimes, but the impacts are strong over the short term.

Significant and Unavoidable: An adverse physical environmental impact that exceeds the defined significance criteria and cannot be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations and for which there are no feasible mitigation measures.

Significant and Unavoidable with Mitigation: An adverse physical environmental impact that exceeds the defined significance criteria but can be reduced through compliance with existing local, state, and federal laws and regulations and/or implementation of all feasible mitigation measures but cannot be reduced to a less-than-significant level.

Significant Trees: Trees that are more than 20 feet tall with a 15-foot-wide canopy or a 12-inch trunk diameter at 4.5 feet above grade on private land within 10 feet of the public right-of-way or under the jurisdiction of public works.

Square-Foot-Hour: One hour of sunlight on one square foot of ground.

State Fully Protected Species: Species that cannot be taken at any time, except, under certain circumstances.

Steradian: A unit of measurement of a round surface area on a sphere (i.e., if there is a cone emanating from the center of a sphere, the rounded area it encompasses at the edge of the sphere is measured in steradians).

Street Tree: Any tree within the public right-of-way.

T Intersection: Where two roadways meet in a perpendicular manner and one roadway does not continue across the other roadway, forming a “T” shape.

Take: Hunt, pursue, catch, capture or kill or attempt to hunt, pursue, catch, capture, or kill.

Theoretical Annual Available Sunlight: The amount of sunlight, measured in square-foot-hours, that would fall on a given park during the hours covered by section 295.

Total Maximum Daily Load: A regulatory term in the Clean Water Act that describes a plan for restoring impaired waters. The total maximum daily load identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

Tour: Represents all trips made between leaving a household and returning to the household.

Transit Conflict Streets: Streets with a primary transit function which are not classified as major arterials but experience substantial conflicts with automobile traffic.

Transit Priority Area: An area within 0.5 mile of an existing or planned major transit stop.

Transit Signal Priority: Refers to special treatment for transit vehicles at signalized intersections. Transit signal priority generally uses technology to reduce dwell time at traffic signals for transit vehicles by holding green lights longer or shortening red lights for transit vehicles.

Uniformly Applicable Development Policies: Policies or standards adopted or enacted by a city or county, or by a lead agency, to reduce one or more adverse environmental effects.

Unimpaired Flow: The water production of a river basin, unaltered by upstream diversions, storage, or the export or import of water to or from other watersheds.

Unique Paleontological Resources: These are fossils that contribute to scientific knowledge, including identifiable vertebrate fossils; uncommon invertebrate, plant, and trace fossils; and other data that provide information that informs scientific understanding of the processes of fossilization (taphonomy), classification of organisms (taxonomy), evolutionary development of a group of organisms (phylogeny), the ecology of fossilized organisms (paleoecology), age and other characteristics of geologic units (stratigraphy), and/or the correlation of biological events using fossils (biochronology). These are also labeled significant paleontological resources by the Society of Vertebrate Paleontology.

Vision Zero: A policy that assists in focusing traffic safety investments to reduce severe and fatal injuries to people walking, bicycling, and driving on streets where most severe or fatal injuries are concentrated.

Well-Resourced Areas: Refers to high- and highest-resource areas, which are neighborhoods identified by the State of California that provide strong economic, health, and educational outcomes for its residents.

Wind Hazard Criterion: Derived from the wind condition that would generate a three-second gust of wind at 20 meters per second, a commonly used guideline for wind safety.

Yield Lines: Roadway surface markings, consisting of solid white triangles that point toward approaching vehicles. They extend across approach lanes to inform drivers as to where they should stop or yield when approaching an intersection.

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SUMMARY

S.1 Introduction

This document is an environmental impact report (EIR) for the San Francisco Housing Element 2022 Update (housing element update or proposed action). This summary chapter is intended to highlight major areas of importance in the environmental analysis as required by section 15123 of the California Environmental Quality Act (CEQA) Guidelines. This chapter provides an overview of the proposed action; a summary of the environmental impacts of the proposed action; a summary of alternatives to the proposed action, including identification of the environmentally superior alternative; and a summary of environmental issues to be resolved and areas of known controversy.

The summary of the environmental impacts of the proposed action provides a brief discussion of the notice of preparation (NOP) of an EIR for the proposed housing element update, the topics analyzed in the EIR, and the terms used in the EIR to describe the level of significance of impacts. It is followed by a summary table that presents the environmental impacts of the proposed action identified in the EIR by topic and, where applicable, the corresponding mitigation measures that would reduce or lessen significant impacts (levels of significance are described on p. S-3). Following the summary table is a description of the alternatives to the proposed action that are addressed in this EIR; a table that compares the characteristics and environmental impacts of the alternatives with those of the proposed action, as well as other project alternatives; and the identification of the environmentally superior alternative.

S.2 Proposed Action Overview

The San Francisco Planning Commission (planning commission, and project sponsor) is proposing to update the 2014 housing element (existing 2014 housing element) of the San Francisco General Plan (general plan). This EIR has been prepared to evaluate the impacts on the environment that could result from adoption and implementation of the housing element update. The housing element update is mandated by state law, Government Code section 65583.

The housing element update establishes goals, policies, and actions to address the existing and projected housing needs of San Francisco. The goals, policies, and actions are required to plan for the regional housing targets allocated to San Francisco by regional agencies for 2023 to 2031 and to meet future housing demand in San Francisco. The housing element update includes policies designed to improve housing affordability and advance racial and social equity in accordance with the directives from the planning commission and historic preservation commission in summer 2020.¹ The housing element update includes overarching goals for the

¹ San Francisco Planning Commission Resolution No. 20738, https://sfplanning.org/sites/default/files/documents/admin/R-20738_Centering_Planning_on_Racial_and_Social_Equity.pdf, June 11, 2020 and Historic Preservation Commission Resolution No. 1127, https://sfplanning.org/sites/default/files/documents/admin/R-1127_HPC_Equity_Resolution.pdf, July 15, 2020.

future of housing in San Francisco that respond both to state law requirements as well as local community values as understood from community outreach conducted for the housing element update. The underlying policies and actions would guide development patterns and the allocation of resources to San Francisco neighborhoods. In general, the housing element update would shift an increased share of the City and County of San Francisco's (city's) future housing growth to transit corridors and low-density residential districts within well-resourced areas (see **Figure 2-1**, p. 2-2, in Chapter 2, Project Description).²

The housing element update would modify the policies of the general plan's housing element. It would not implement specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure).³ As such, the proposed action would not result in any direct physical changes to the environment, but would result in reasonably foreseeable indirect changes. Specifically, the department assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and to modify density controls in low-density areas that are primarily located on the west and north sides of the city, designation of housing sustainability districts, and approval of development projects consistent with the goals, policies, and actions of the housing element update.

In accordance with California Environmental Quality Act (CEQA) Guidelines section 15064(d), the EIR identifies these reasonably foreseeable environmental impacts that could occur as a result of the proposed action. When the EIR uses the phrase "impacts of the proposed action," it refers to the reasonably foreseeable impacts that would result from those future implementation actions and development compared with the development anticipated under the existing 2014 housing element through 2050. Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the City and County of San Francisco (city) by 2050, compared to 2020 conditions. The department projects approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (2050 environmental baseline).⁴ In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated under the existing 2014 housing element. Future development consistent with the housing element update would predominately consist of residential projects, some with ground floor neighborhood services (e.g., retail or small medical offices), in well-resourced areas and along transit corridors.

² *Well-resourced areas* are high- and highest-resource areas, which are neighborhoods identified by the State of California that provide strong economic, health, and educational outcomes for its residents. More information is available at: <https://www.sfhousingelement.org/well-resourced-neighborhoods>.

³ Any changes to existing land use controls would require related legislative processes including review and public hearings before the planning commission and/or the board of supervisors. Approval of housing development or infrastructure would require development applications and approval. This EIR analyzes the secondary physical environmental impacts that could occur as a result of the housing element update.

⁴ As described in Chapter 4, Environmental Setting and Impacts, the 2050 projected growth under the existing 2014 housing element is considered the 2050 environmental baseline.

S.3 Summary of Impacts and Mitigation Measures

This EIR identifies the reasonably foreseeable indirect environmental impacts that could occur as a result of future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050 at a programmatic level, in accordance with CEQA Guidelines section 15168.

On June 16, 2021, the department sent a NOP of an EIR for the proposed housing element update to governmental agencies, organizations, and persons who may have an interest in the proposed action. The NOP requested that agencies and interested parties comment on environmental issues that should be addressed in the EIR (see Appendix A, Notice of Preparation and Comments Received). A virtual scoping meeting was held on June 29, 2021 to explain the environmental review process for the proposed action and provide an opportunity to take public comments related to the environmental issues of the housing element update. The department posted the scoping meeting presentation in English, Chinese, Spanish, and Filipino on the department's website.

The department considered the public comments received at the scoping meeting and prepared an EIR. In the course of evaluating the potential impacts of the proposed action on the environment with respect to the topics included in CEQA Guidelines Appendix G checklist, the proposed action was found to have no impact or a less-than-significant impact with respect to the following environmental topics: land use and planning, aesthetics, population and housing, greenhouse gas emissions, recreation, public services, biological resources, geology and soils (except paleontology), hydrology and water quality, hazards and hazardous materials, and energy. Mineral resources, agriculture and forestry resources, and wildfire are not applicable to the proposed action. Therefore, these environmental topics are discussed in this section rather than in standalone sections of this EIR (e.g., Section 4.2, Cultural Resources; Section 4.3, Tribal Cultural Resources; Section 4.4, Transportation and Circulation; etc.). Although there would be significant impacts related to the construction of new or expanded recreation and public services facilities, these topics are included in this section because these impacts would be reduced to less than significant through implementation of the same or similar mitigation measures identified in other sections of this EIR, including Section 4.2, Cultural Resources; Section 4.3, Tribal Cultural Resources; Section 4.5, Noise and Vibration, and Section 4.6, Air Quality.

Table S-1, p. S-7, presents a summary of the environmental effects identified in this EIR, along with feasible mitigation measures to avoid or reduce the severity of significant impacts. In addition, the level of significance both before and after implementation of any identified mitigation measure is indicated.

Impacts are categorized by type of impact, as follows:

- *No Impact (NI)*. No adverse changes (or impacts) on the environment are expected
- *Less than Significant (LTS)*. An impact that would not involve an adverse physical change to the environment, would not exceed the defined significance criteria, or would be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations
- *Less than Significant with Mitigation (LTSM)*. An impact that is reduced to a less-than-significant level through implementation of the identified mitigation measures

- *Significant and Unavoidable with Mitigation (SUM)*. An adverse physical environmental impact that exceeds the defined significance criteria and can be reduced through compliance with existing local, state, and federal laws and regulations and/or implementation of all feasible mitigation measures but cannot be reduced to a less-than-significant level
- *Significant and Unavoidable (SU)*. An adverse physical environmental impact that exceeds the defined significance criteria and cannot be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations and for which there are no feasible mitigation measures

Significant Impacts

All impacts of the proposed action and the associated mitigation measures identified in this EIR are summarized in **Table S-1**, p. S-7. The impacts are listed in the same order as they appear in the text of Chapter 4, Environmental Setting and Impacts.

Significant impacts would be reduced to a less-than-significant level with implementation of mitigation measures for the following topics: cultural resources (archeology and human remains), tribal cultural resources, recreation, public services, noise and vibration (groundborne vibration), air quality (construction air quality), utilities and service systems (electronic power or telecommunication facilities), and geology and soils (paleontological resources).

Significant impacts would remain significant and unavoidable, even with implementation of mitigation measures, for the following topics: cultural resources (project-level and cumulative: built-environment historic resources), transportation and circulation (project-level and cumulative: transit delay and loading), noise and vibration (project-level: construction noise, operational noise; cumulative: construction noise), air quality (project-level: criteria pollutants; project-level and cumulative: exposure of sensitive receptors to substantial levels of fine particulate matter and toxic air contaminants), wind, shadow, and utilities and service systems (wastewater facilities).

Significant impacts would remain significant and unavoidable where mitigation is not feasible for the following topics: transportation and circulation (project-level and cumulative: construction) and utilities and service systems (water supply).

S.4 Areas of Known Controversy and Issues to Be Resolved

As noted above, on June 16, 2021, the department sent a NOP of an EIR for the proposed housing element update to governmental agencies, organizations, and persons who may have an interest in the proposed action. The NOP requested that agencies and interested parties comment on environmental issues that should be addressed in the EIR (see Appendix A of this EIR). A virtual scoping meeting was held on June 29, 2021 to explain the environmental review process for the proposed action and provide an opportunity to take public comments related to the environmental issues of the housing element update. **Table 1-1**, p. 1-6, in Chapter 1, Introduction, summarizes the issues raised by the public and governmental agencies in response to the NOP prepared for the

proposed action. To the extent the comments received on the NOP of an EIR relate to environmental issues, they are addressed in this EIR. Any comments related to action merits that cannot be addressed through the CEQA process will be provided to decision makers as part of the adoption of the housing element.

S.5 Summary of Alternatives

Chapter 6, Alternatives, considers a reasonable range of alternatives that would reduce, avoid, or eliminate potential impacts of the proposed action while still feasibly meeting most of the objectives of the proposed action. The alternatives studied in this EIR include:

- The No Project Alternative, which assumes housing development would continue to occur in San Francisco under the goals, policies, and implementing measures of the existing 2014 housing element
- The Eastside Alternative, which would include policies that would continue the existing development pattern in the city, which focuses development on the east side of the city and maintains lower density in the western neighborhoods
- The Preservation Alternative, which assumes that some of the proposed action’s policies would be revised to include an additional focus on preserving historic resources and ensuring compatibility with historic districts
- The Dispersed Growth Alternative, which would include policies that would direct growth to well-resourced neighborhoods, mostly within low-density neighborhoods, focusing only on small multi-family buildings
- The Plan Bay Area 2050 Alternative, which is the long-range integrated transportation and land use/housing strategy through 2050 for the San Francisco Bay Area

S.6 Environmentally Superior Alternative

CEQA Guidelines section 15126(c) requires an EIR to identify the alternative to the proposed project that would have the least adverse environmental impacts (i.e., the “environmentally superior alternative”). Because it would result in the construction and operation of approximately 50,000 fewer housing units, the EIR identifies the No Project Alternative as the environmentally superior alternative. However, CEQA Guidelines section 15126.6(e)(2) provides that if the “no project” alternative is the environmentally superior alternative, the EIR should also identify an environmentally superior alternative among the other alternatives.

Among the other alternatives, the Preservation Alternative would be the environmentally superior alternative because it would result in impacts similar to those of the proposed action with the exception of impacts to built-environment historical resources, which would be less than for the proposed action, while avoiding the greater impacts anticipated under the Eastside and Dispersed Growth alternatives for built-environment historic resources, archeological resources, tribal cultural resources, transportation hazards during construction, loading, cumulative transportation hazards during construction, cumulative public transit delay, and cumulative loading. In addition, the Preservation Alternative would fully meet two of the project objectives related to recognizing the right to housing as a foundation for health, and social and economic well-being as well as providing sufficient housing for existing

residents and future generations for a city with diverse cultures, family structures, and abilities. In comparison, the Eastside and Dispersed Growth alternatives would only fully meet one of the project objectives related to providing sufficient housing for existing residents and future generations for a city with diverse cultures, family structures, and abilities. Therefore, the Preservation Alternative is the environmentally superior alternative.

S.7 Summary Tables

Table S-1 includes the impacts and mitigation measures identified in the EIR for the proposed action, **Table S-2**, p. S-89, includes a comparison of the significant impacts of the proposed action to the impacts of the CEQA alternatives, and **Table S-3**, p. S-89, includes a comparison of the significant impacts of the proposed action to the impacts of the No Project Alternative.

The information in the tables is organized to correspond with the environmental issues discussed in Chapter 4 of the EIR. **Table S-1** is arranged in four columns: 1) environmental impacts, 2) level of significance before mitigation measures (if applicable), 3) mitigation measures (if applicable), and 4) level of significance after mitigation (if applicable). The topics in **Table S-1** are listed in the same order as they appear in the text of Chapter 4, Environmental Setting and Impacts. For a complete description of potential impacts and recommended mitigation measures, please refer to the topical sections in Chapter 4.

Table S-1: Summary of Impacts of Proposed Action

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Land Use and Planning (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact LU-1: The proposed action would not physically divide an established community.	LTS	None required.	NA
Impact LU-2: The proposed action would not cause a significant physical environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	None required.	NA
Impact C-LU-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative land use impact.	LTS	None required.	NA
Aesthetics (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact AE-1: The proposed action would not have a substantial adverse effect on a scenic vista.	LTS	None required.	NA
Impact AE-2: The proposed action would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
buildings within a state scenic highway.			
Impact AE-3: The proposed action would not conflict with applicable zoning and other regulations governing scenic quality.	LTS	None required.	NA
Impact AE-4: The proposed action would not create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.	LTS	None required.	NA
Impact C-AE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative aesthetic impact.	LTS	None required.	NA
Population and Housing (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact PH-1: The proposed action would not induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).	LTS	None required.	NA
Impact PH-2: The proposed action would not displace substantial numbers of existing people or	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
housing units, necessitating the construction of replacement housing.			
Impact C-PH-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact from unplanned population growth or displacement.	LTS	None required.	NA
Greenhouse Gas Emissions (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact GHG-1: The proposed action would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	LTS	None required.	NA
Impact GHG-2: The proposed action would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases.	LTS	None required.	NA
Recreation (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact RE-1: The proposed action would not increase the use of existing neighborhood and regional parks or other	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.			
Impact RE-2: The proposed action would not include recreational facilities but would require the construction or expansion of recreational facilities that would have an adverse physical effect on the environment.	S	These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.	LTSM
Impact C-RE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on recreation.	S	These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and	LTSM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.	
Public Services (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact PS-1: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency medical services.	S	These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.	LTSM
Impact PS-2: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other	S	These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of	LTSM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
performance objectives for police protection.		Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.	
Impact PS-3: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios or other performance objectives for schools.	S	These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.	LTSM
Impact PS-4: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service	S	These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and	LTSM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
ratios or other performance objectives for libraries.		Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.	
Impact PS-5: The proposed action would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for parks.	S	These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.	LTSM
Impact C-PS-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on public services.	LTS	None required.	NA
Biological Resources (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact BIO-1: The proposed action would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.			
Impact BIO-2: The proposed action would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	LTS	None required.	NA
Impact BIO-3: The proposed action would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	LTS	None required.	NA
Impact BIO-4: The proposed action would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
impede the use of native wildlife nursery sites.			
Impact BIO-5: The proposed action would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LTS	None required.	NA
Impact C-BIO-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on biological resources.	LTS	None required.	NA
Geology and Soils (except Paleontological Resources) (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact GE-1: The proposed action would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismically related ground failure, liquefaction, or landslides.	LTS	None required.	NA
Impact GE-2: The proposed action would not result in substantial soil erosion or the loss of topsoil.	LTS	None required.	NA
Impact GE-3: The proposed action would not result in a substantial	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
risk of loss, injury, or death involving unstable geologic units or soils or onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse.			
Impact GE-4: The proposed action would not result in a substantial risk of loss, injury, or death related to expansive soils.	LTS	None required.	NA
Impact C-GE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on geology and soils.	LTS	None required.	NA
Hydrology and Water Quality (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact HY-1: The proposed action would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	LTS	None required.	NA
Impact HY-2: The proposed action would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
groundwater management of the basin.			
Impact HY-3: The proposed action would not substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would result in substantial erosion, siltation, or flooding on- or offsite, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite, or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	LTS	None required.	NA
Impact HY-4: In flood hazard, tsunami, or seiche zones, the proposed action would not risk a release of pollutants due to project inundation.	LTS	None required.	NA
Impact HY-5: The proposed action would not conflict with or obstruct implementation of a water quality	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
control plan or sustainable groundwater management plan.			
Impact C-HY-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on hydrology and water quality.	LTS	None required.	NA
Hazards and Hazardous Materials (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact HAZ-1: The proposed action would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS	None required.	NA
Impact HAZ-2: The proposed action would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	LTS	None required.	NA
Impact HAZ-3: The proposed action would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
within 0.25 mile of an existing or proposed school.			
Impact HAZ-4: The proposed action could be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard for the public or the environment.	LTS	None required.	NA
Impact HAZ-5: The proposed action would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	None required.	NA
Impact C-HAZ-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on hazards.	LTS	None required.	NA
Energy (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Impact EN-1: The proposed action would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
energy resources during project construction or operation.			
Impact EN-2: The proposed action would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	None required.	NA
Impact C-EN-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on energy.	LTS	None required.	NA
Mineral Resources, Agricultural and Forest Resources, and Wildfire (Evaluated in Section 4.1, Effects Found Not to Be Significant)			
Mineral Resources, Agriculture and Forest Resources, and Wildfire	NA	None required.	NA
Cultural Resources			
Impact CR-1: The proposed action would cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5.	S	<p>Mitigation Measure M-CR-1a: Avoid or Minimize Effects on Identified Built Environment Resources.</p> <p>The project sponsor of a future development project consistent with the housing element update that would result in material impairment to a built-environment historic resource, either an individual resource or a historic district, shall consult with the department’s preservation and design staff on feasible means for avoiding or reducing significant adverse effects on built-environment resources per applicable department guidelines, such as residential design guidelines and policies in the urban design element. The project sponsor, in consultation with preservation and design staff, shall provide at minimum drawings and rendering of a proposed project that avoids material impairment of the historic resource in order for the environmental review officer (ERO) to determine if such a project is feasible. Additional studies and reports, such as an economic feasibility analysis, may be required as directed by the ERO. If the project is determined infeasible</p>	SUM

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		<p>based on the above criteria, the project sponsor shall consult with the department’s preservation and design staff to determine an approach to reduce the significant impact on built-environment resources. This could include, but is not limited to, retaining a portion of the existing building or retaining specific character-defining features and incorporating them into the project. The project sponsor shall demonstrate the feasibility, as defined in CEQA Guidelines section 15364 and as determined by the ERO, of retention of character-defining features or a portion of the existing building to the department’s preservation and design staff by providing drawings and renderings along with other requested studies and reports.</p> <p>Mitigation Measure M-CR-1b: Best Practices and Construction Monitoring Program for Historic Resources.</p> <p>Prior to the issuance of demolition, building, or site permits, the project sponsor of a future development project consistent with the housing element update using heavy-duty construction equipment on a project site that contains a historic resources or on a project site that is adjacent to a historic resource shall incorporate into contract specifications a requirement that the contractor(s) use all feasible means to protect and avoid damage to onsite and adjacent historic resources as identified by the department, including, but not necessarily limited to, staging of equipment and materials so as to avoid direct damage, maintaining a buffer zone when possible between heavy equipment and historic resources, or covering the roof of adjacent structures to avoid damage from falling objects. Specifications shall also stipulate that any damage incurred to historic resources as a result of construction activities shall be reported to the environmental review officer within three days. Prior to the issuance of demolition, building, or site permits, the project sponsor shall submit to the department preservation staff for review and approval, a list of measures to be included in contract specifications to avoid damage to historic resources.</p> <p>If damage to a historic resource occurs during construction, the project sponsor shall hire a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate), as set forth by the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulations, part 61). Damage incurred to the historic resource shall be repaired per the secretary’s standards in consultation with the</p>	

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		<p>qualified professional and department preservation staff. If directed by department preservation staff, the project sponsor shall engage a qualified preservation professional to undertake a monitoring program to ensure that best practices are being followed. If monitoring is required, the qualified preservation professional shall prepare a monitoring plan to direct the monitoring program that shall be reviewed and approved by department preservation staff.</p> <p>Mitigation Measure M-CR-1c: Relocation Plan.</p> <p>If the department determines relocation of a historic resource is a feasible means of reducing impacts to the resource, the project sponsor shall retain a qualified historical architect who meets the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulations, part 61) and structural engineer with experience in moving historic resources to prepare a relocation plan. The relocation plan will be reviewed and approved by the department to ensure that character-defining features of the buildings will be retained. The department’s review and approval of the relocation plan shall occur prior to the approval of any permits for the proposed project. The relocation plan shall include required qualifications for the building relocation company to ensure that relocation is undertaken by a company that is experienced in moving historic buildings of a similar size and/or structural system as the historic resource. The relocation plan shall ensure that the historic resource will be moved without irreparable damage to the character-defining historic fabric of the resource. The project sponsor will incorporate into construction specifications for the proposed project a requirement that the construction contractor(s) use all feasible means to avoid damage to the subject property during its relocation, including, but not limited to, relocation methods and relocation activity routes, closures, and timing.</p> <p>Mitigation Measure M-CR-1d: Documentation.</p> <p>Prior to the issuance of demolition, building, or site permits, the project sponsor shall submit to the department for review photographic and narrative documentation of the subject building, structure, object, material, and landscaping. Documentation may apply to individually significant resources as well as district contributors and shall focus on the elements of the property that the project proposes to demolish or alter. The</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>documentation shall be funded by the project sponsor and undertaken by a qualified professional who meets the standards for history, architectural history, or architecture (as deemed appropriate by the department’s preservation staff), as set forth by the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulations, part 61). The department’s preservation staff will determine the specific scope of the documentation depending upon the individual property’s character-defining features and reasons for significance. The documentation scope shall be reviewed and approved by the department prior to any work on the documentation. A documentation package shall consist of the required forms of documentation and shall include a summary of the historic resource and an overview of the documentation provided. The types and level of documentation will be determined by department staff and may include any of the following formats:</p> <ul style="list-style-type: none"> • <i>HABS/HALS-Like Measured Drawings</i> –A set of Historic American Building/Historic American Landscape Survey-like (HABS/HALS-like) measured drawings that depict the existing size, scale, and dimension of the subject property. The department’s preservation staff will accept the original architectural drawings or an as-built set of architectural drawings (plan, section, elevation, etc.). The department’s preservation staff will assist the consultant in determining the appropriate level of measured drawings. A cover sheet may be required that describes the historic significance of the property. • <i>HABS/HALS-Like Photographs</i> – Digital photographs of the interior and the exterior of the subject property. Large-format negatives are not required. The scope of the digital photographs shall be reviewed by the department’s preservation staff for concurrence, and all digital photography shall be conducted according to current National Park Service standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HABS photography. • <i>HABS/HALS-Like Historical Report</i> – If the department determines that existing survey information or historic resource evaluations of a property do not sufficiently document the historic resources’ significant associations, a written historical narrative and report shall be provided in accordance with the HABS/HALS Historical Report Guidelines. The written history shall follow an outline format that begins with 	

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		<p>a statement of significance supported by the development of the architectural and historical context in which the structure was built and subsequently evolved. The report shall also include architectural description and bibliographic information.</p> <ul style="list-style-type: none"> • <i>Print-on-Demand Book</i> – The Print-on-Demand book shall be made available to the public for distribution by the project sponsor. The project sponsor shall make the content from the historical report, historical photographs, HABS photography, measured drawings, and field notes available to the public through a preexisting print-on-demand book service. This service will print and mail softcover books containing the aforementioned materials to members of the public who have paid a nominal fee. The project sponsor shall not be required to pay ongoing printing fees once the book has been made available through the service. • <i>Digital Recordation</i> – In coordination with the department’s preservation staff, the project sponsor may be required to prepare some other form of digital recordation of the historic resource. The most commonly requested digital recordation is video documentation but other forms of digital recordation, include 3D laser scan models or 3D virtual tours, Gigapan/Matterpoint or other high-resolution immersive panoramic photography, time-lapse photography, photogrammetry, audio/olfactory recording, or other ephemeral documentation of the historic resource may be required. The purpose of these digital records is to supplement other recordation measures and enhance the collection of reference materials that would be available to the public and inform future research. This digital recordation could also be incorporated into the public interpretation program. Digital recordation shall be conducted by individuals with demonstrated experience in the requested type of digital recordation. If video documentation is required, it shall be conducted by a professional videographer with experience recording architectural resources. The professional videographer shall provide a storyboard of the proposed video recordation for review and approval by the department’s preservation staff. • The project sponsor, in consultation with the department, shall conduct outreach to determine which repositories may be interested in receiving copies of the documentation. Potential repositories include but are not limited to, the San Francisco Public Library, the Environmental Design Library at the University of 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>California, Berkeley, the Northwest Information Center, San Francisco Architectural Heritage, the California Historical Society, and Archive.org. The final approved documentation shall be provided in electronic form to the department and the interested repositories. The department will make electronic versions of the documentation available to the public for their use at no charge.</p> <ul style="list-style-type: none"> • The professional(s) shall submit the completed documentation for review and approval by the department’s preservation staff. All documentation must be reviewed and approved by the department prior to the issuance of any demolition, building or site permit is approved for a proposed project. <p>Mitigation Measure M-CR-1e: Oral History.</p> <p>The project sponsor shall retain the services of a qualified historian with experience in oral history to undertake an oral history about the historic resource. This oral history project shall consist of interviews and recollections of individuals with a connection to the historic resource that may include owners, occupants, or other related community members. The success of this effort will depend primarily on the ability of the project sponsor to locate such persons, and on their willingness/ability to participate. Therefore, the project sponsor shall make a good faith effort to publicize the oral history project, conduct public outreach, and identify a wide range of potential interviewees. To accomplish this, the sponsor shall employ a range of measures that may include hosting events that allow participants to record their recollections, and hosting a website that allows interviewees to contribute remotely. Prior to undertaking this effort, the scope and methodology of the oral history project shall be reviewed and approved by the department’s preservation staff.</p> <p>In addition to potentially use for the on-site interpretive program or documentation, the project sponsor shall have the recordings of the oral history project transcribed and indexed, and the department shall host the transcribed and indexed recordings, which will made available to the public at no charge. The department will also ensure that any information provided in the oral histories are integrated with SF Survey and Citywide historic context statement summarized above. Transcribed and indexed recordings will</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>also be made available to other archives and repositories in order to allow for remote, off-site historical interpretation of the historic resources.</p> <p>Mitigation Measure M-CR-1f: Salvage Plan.</p> <p>Prior to the issuance of demolition, building, or site permits that would remove character-defining features of a built environment historic resource that would have a significant impact, the project sponsor shall consult with the department’s preservation staff as to whether any such features may be salvaged, in whole or in part, during demolition or alteration. The project sponsor shall make a good faith effort to salvage and protect materials of historical interest to be used as part of the interpretative program (if required), incorporated into the architecture of the new building that will be constructed on the site, or offered to non-profit or cultural affiliated groups. If this proves infeasible, the sponsor shall attempt to donate significant character-defining features or features of interpretative or historical interest to a historical organization or other educational or artistic group. The project sponsor shall prepare a salvage plan for review and approval by the department’s preservation staff prior to issuance of any site demolition permit.</p> <p>Mitigation Measure M-CR-1g: Interpretation.</p> <p>The project sponsor shall facilitate the development of a public interpretive program focused on the history of the project site, its identified historic resources, and its significant historic context. The interpretive program should be developed and implemented by a qualified design professional with demonstrated experience in displaying information and graphics to the public in a visually interesting manner, as well as a professionally qualified historian or architectural historian, or community group approved by the department. Through consultation with department preservation staff, coordination with local artists should occur. The primary goal of the program is to educate visitors and future residents about the property’s historical themes, associations, and lost contributing features within broader historical, social, and physical landscape contexts.</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>The interpretive program shall be initially outlined in an interpretive plan subject to review and approval by the department’s preservation staff prior to approval of demolition, building, or site permits for the project. The plan shall include the general parameters of the interpretive program including the substance, media, and other elements of the interpretive program. The interpretive program shall include within publicly accessible areas of the project site permanent display(s) of interpretive materials concerning the history and design features of the affected historic resource, including both the site as a whole and the individual contributing buildings and features. The display shall be placed in a prominent, public setting within, on the exterior of, or in the vicinity of newly constructed buildings or other features within the project site. The interpretive material(s) shall be made of durable all-weather materials and may also include digital media in addition to a permanent display. The interpretive material(s) shall be of high quality and installed to allow for high public visibility. Content developed for other mitigation measures, as applicable, including the oral history and documentation programs, may be used to inform and provide content for the interpretive program. For properties that do not have a completed Historic Resource Evaluation, the professionally qualified consultant shall undertake research to sufficiently place the historic resource within its larger historic context (geographic and thematic). The interpretive program may also incorporate video documentation completed under M-CR-1f, Documentation, as applicable to provide a narrated video that describes the materials, construction methods, current condition, historical use, historic context and cultural significance of the historic resource.</p> <p>The detailed content, media, and other characteristics of such an interpretive program shall be coordinated and approved by the department’s preservation staff. The final components of the public interpretation program shall be constructed and an agreed upon schedule for their installation and a plan for their maintenance shall be finalized prior to issuance of a Temporary Certificate of Occupancy.</p> <p>The interpretive program shall be developed in coordination with the other interpretive programs as relevant, such as interpretation required under archeological resource mitigation measures and tribal cultural resource mitigation measures, Native American land acknowledgments, or other public interpretation programs.</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>The department will also ensure that any information gathered through the interpretative program development is integrated with SF Survey and Citywide historic context statement summarized above.</p> <p>Mitigation Measure M-CR-1h: Historic Context.</p> <p>To assist in the collection of information that will inform and direct the historical interpretation, the sponsor shall fund a historic context study prepared by a professionally qualified historian or architectural historian, or community group approved by the department to identify significant trends and events associated with a relevant topic to the identified historic resource, as well as identify other associated buildings and sites throughout San Francisco. The objective of this study is to provide background information that will enrich the historical contexts that have already been established for the subject building and to place the subject building within the wider relevant context, for the benefit of the general public interpretation program.</p> <p>The department will also ensure that the historic context is integrated with SF Survey and Citywide historic context statement summarized above.</p> <p>Mitigation Measure M-CR-1i: Walking or Building Tour.</p> <p>The project sponsor shall engage with SF City Guides, or another tour guide group or association as approved by the department’s preservation staff, to develop content for a walking or building tour relevant to the historic resource. The project sponsor shall reach out to the list of tour guide groups provided by preservation staff and provide copies of communication with those groups. Once a tour guide group has been identified, the project sponsor shall engage a qualified architectural historian meeting the qualifications set forth in the Secretary of the Interior’s Professional Qualification Standards to work with the sponsor and selected tour guide group to develop content for the tour. Tour content shall use information found in the Historic Resources Evaluation and the Historic Resources Evaluation Response prepared for the project, other available background information on the resource, and the content from other mitigation measures. Other existing information, including photographs, news articles, oral histories, memorabilia and video, may be used to develop information for the walking tour as necessary. The</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>qualified architectural historian and scope of work must be reviewed by preservation staff prior to the issuance of demolition, building, or site permits. Preservation staff must review and approve final content of the walking tour and must receive proof of receipt by the approved tour group or association prior to issuance of temporary certificate of occupancy.</p> <p>Mitigation Measure M-CR-1j: Educational Program.</p> <p>The project sponsor shall fund the preparation of an educational program that describes the history and significant associations of the historic resource. The scope of the program shall be determined in consultation with the department and shall be prepared by a professionally qualified historian, architectural historian, or historical architecture (as appropriate), as set forth by the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulations, part 61), or community or educational group approved by the department. The purpose of the educational program is to package the relevant history and significant associations into an educational format that engages the public in the significance of the resource, which could serve as a teaching curriculum or presentation the public could easily understand. Other mitigation measures may provide materials that aid in the preparation of the educational program.</p> <p>Mitigation Measure M-CR-1k: Community Memorial Event.</p> <p>For the public benefit in commemorating a publicly accessible historic resource that is significant for association with a community, social group, or neighborhood, the project sponsor shall organize and fund a commemorative event recognizing the historic resource’s significance in the form of a public gathering. The project sponsor shall reach out to relevant community groups associated with the historic resource that may be interested in co-sponsoring the organization of the commemorative event. The purpose of the event would be to commemorate the site’s history and provide a public space to gather information, stories, or other histories relevant to the historic resource that may inform other mitigation measures including documentation, oral histories, and interpretation. The form of the event shall be determined in coordination with department staff and may take on a variety of forms. This could include a publicly led</p>	

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		<p>tour or open house that takes place at the site of the historic resource, or an event held nearby the historic resource.</p> <p>Mitigation Measure M-CR-1I: Revise Historic District Documentation.</p> <p>The project sponsor shall coordinate with preservation planning staff to determine the project’s contribution towards any impairment of a historic district, review the historic district documentation, and determine if the district boundaries should be revised to retain a portion of the district that still expresses some aspects of its historical significance. Based on the extent of contribution, preservation planning staff may require the project sponsor to engage a professionally qualified architectural historian, as set forth by the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulations, part 61) to prepare documentation of the revised district boundary and justification of its retained integrity. The revised documentation shall be submitted to the appropriate reviewing agency, depending upon its previous level of evaluation or designation. Such documentation may include a historic district assessment report for review by the department’s preservation staff, or a National Register of Historic Places designation form for review by the State Historic Preservation Office.</p> <p>Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction.</p> <p>(See Section 4.5, Noise and Vibration, and below)</p>	
<p>Impact CR-2: The proposed action has the potential to cause a substantial adverse change in the significance of an archeological resource pursuant to section 15064.5.</p>	<p>S</p>	<p>Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance.</p> <p>The following mitigation measure shall be implemented for any project for which the preliminary archeological review conducted by department staff identifies the potential for significant archeological impacts. This measure applies to discoveries made in the absence of an archeologist and to discoveries during archeological monitoring or testing.</p> <p>ALERT sheet. The project sponsor shall distribute the planning department archeological resource “ALERT” sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities</p>	<p>LTSM</p>

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		<p>firm involved in soils-disturbing activities within the project site. Prior to any soils-disturbing activities being undertaken, each contractor is responsible for ensuring that the “ALERT” sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the environmental review officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel involved in soil-disturbing activities have received copies of the “ALERT” sheet.</p> <p>Procedures Upon Discovery of a Suspected Archeological Resource. The following measures shall be implemented in the event of a suspected archeological discovery during project soil-disturbing activities:</p> <p>Discovery Stop Work and Environmental Review Officer Notification. Should any indication of an archeological resource be encountered during any soils-disturbing activity of the project, the project sponsor shall immediately notify the ERO and shall immediately suspend any soils-disturbing activities in the vicinity of the discovery and protect the find in place until the significance of the find has been evaluated and the ERO has determined whether and what additional measures are warranted, and these measures have been implemented, as detailed below.</p> <p>Archeological Consultant Identification. If the preliminary archeological review did not require archeological monitoring or testing, and an archeological discovery during construction occurs prior to the identification of a project archeologist, and the ERO determines that the discovery may represent a significant archeological resource, the project sponsor shall retain the services of an archeological consultant (hereinafter “project archeologist”) from a firm listed on the Qualified Archeological Consultant list maintained by the department to identify, document, and evaluate the resource, under the direction of the ERO. The project sponsor shall ensure that the project archeologist or designee is empowered, for the remainder of soil-disturbing project activity, to halt soil disturbing activity in the vicinity of potential archeological finds, and that work remains halted until the discovery has been assessed and a treatment determination made, as detailed below.</p> <p>Resource Evaluation and Treatment Determination. If an archeological find is encountered during construction or archeological monitoring or testing, the project</p>	

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		<p>archeologist shall redirect soil-disturbing and heavy equipment activity in the vicinity away from the find. If in the case of pile driving activity (e.g., foundation, shoring, etc.), the project archeologist has cause to believe that the pile driving activity may affect an archeological resource, the project sponsor shall ensure that pile driving is halted until an appropriate evaluation of the resource has been made. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.</p> <p><u>Initial documentation and assessment.</u> The project archeologist shall document the find and make a reasonable effort to assess its identity, integrity, and significance of the encountered archeological deposit through sampling or testing, as needed. The project sponsor shall make provisions to ensure that the project archeologist can safely enter the excavation, if feasible. The project sponsor shall ensure that the find is protected until the ERO has been consulted and has determined appropriate subsequent treatment in consultation with the project archeologist, and the treatment has been implemented, as detailed below.</p> <p>The project archeologist shall make a preliminary assessment of the significant and physical integrity of the archeological resource and shall present the findings to the ERO. If, based on this information, the ERO determines that construction would result in impacts to a significant resource, the ERO shall consult with the project sponsor and other parties regarding the feasibility and effectiveness of preservation-in-place of the resource, as detailed below.</p> <p><u>Native American Archeological Deposits and Tribal Notification.</u> All Native American archeological deposits shall be assumed to be significant unless determined otherwise in consultation with the ERO. If a Native American archeological deposit is encountered, soil disturbing work shall be halted as detailed above. In addition, the ERO shall notify any tribal representatives who, in response to the project tribal cultural resource notification, requested to be notified of discovery of Native American archeological resources in order to coordinate on the treatment of archeological and tribal cultural resources. Further the project archeologist shall offer a Native American representative the opportunity to monitor any subsequent soil disturbing activity that could affect the find.</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><u>Submerged Paleosols.</u> Should a submerged paleosol be identified, the project archeologist shall extract and process samples for dating, paleobotanical analysis, and other applicable special analyses pertinent to identification of possible cultural soils and for environmental reconstruction.</p> <p><u>Archeological Site Records.</u> After assessment of any discovered resources, the project archeologist shall prepare an archeological site record or primary record (DPR 523 series) for each documented resource. In addition, a primary record shall be prepared for any prehistoric isolate. Each such record shall be accompanied by a map and GIS location file. Records shall be submitted to the planning department for review as attachments to the archeological resources report (see below) and once approved by the ERO, to the Northwest Information Center.</p> <p><u>Plans and Reports.</u> All archeological plans and reports identified herein and in the subsequent measures, shall be submitted by the project archeologist directly to the ERO for review and comment and shall be considered draft reports subject to revision until final approval by the ERO. The project archeologist may submit draft reports to the project sponsor simultaneously with submittal to ERO.</p> <p><u>Limit on Construction Delays for Archeological Treatment.</u> Archeological testing and as applicable data recovery programs required to address archeological discoveries, pursuant to this measure, could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines.</p> <p><u>Preservation-in-Place Consideration.</u> Should an archeological resource that meets California register significance criteria be discovered during construction, archeological testing, or monitoring, preservation-in-place (i.e., permanently protect the resource from further disturbance and take actions, as needed, to preserve depositional and physical integrity) of the entire deposit or feature is the preferred treatment option. The ERO shall consult with the project sponsor and, for Native American archeological resources, with tribal representatives, if requested, to consider 1) the feasibility of permanently preserving the resource in place, feasible and effective, the project archeologist, in</p>	

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		<p>consultation with the ERO, shall prepare a Cultural Resources Preservation Plan. For Native American archeological resources, the project archeologist shall also consult with the tribal representatives, and the Cultural Resources Preservation Plan shall take into consideration the cultural significance of the tribal cultural resource to the tribes. Preservation options may include measures such as design of the project layout to place open space over the resource location; foundation design to avoid the use of pilings or deep excavations in the sensitive area; a plan to expose and conserve the resource and include it in an on-site interpretive exhibit; tribal representatives for review and for ERO approval. The project sponsor shall ensure that the approved plan is implemented and shall coordinate with the department to ensure that disturbance of the resource will not occur in future, such as establishing a preservation easement.</p> <p>If, based on this consultation, the ERO determines that preservation-in-place is infeasible or would be ineffective in preserving the significance of the resource, archeological data recovery and public interpretation of the resource shall be carried out, as detailed below. The ERO in consultation with the project archeologist shall also determine whether and what additional treatment is warranted, which may include additional testing, construction monitoring, and public interpretation of the resource, as detailed below.</p> <p><u>Coordination with Descendant Communities.</u> On discovery of an archeological site associated with descendant Native Americans, Chinese, or other identified descendant cultural group, the project archeologist shall contact an appropriate representative of the descendant group and the ERO. The representative of the descendant group shall be offered the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site and data recovered from the site, and, if applicable, any interpretative treatment of the site. The project archeologist shall provide a copy of the Archeological Resources Report (ARR) to the representative of the descendant group.</p> <p><u>Compensation.</u> Following on the initial tribal consultation, the ERO, project sponsor and project archeologist, as appropriate, shall work with the tribal representative or other descendant or descendant community representatives to identify the scope of work for a representative to fulfill the requirements of this mitigation measure, which may include</p>	

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		<p>participation in archeological monitoring, preparation and review of deliverables (e.g., plans, interpretive materials, art work). Tribal representatives or other descendant community representatives for archeological resources or tribal cultural resources, who complete tasks in the agreed upon scope of work project, shall be compensated for their work as identified in the agreed upon scope of work.</p> <p>Archeological Data Recovery Program. The project archeologist shall prepare an archeological data recovery plan if all three of the following apply: (1) a potentially significant resource is discovered, (2) preservation-in-place is not feasible, as determined by the ERO after implementation of the Preservation-in-Place Consideration procedures, and (3) the ERO determines that archeological data recovery is warranted. When the ERO makes such a determination, the project archeologist, project sponsor, ERO and, for tribal cultural archeological resources, the tribal representative, if requested by a tribe, shall consult on the scope of the data recovery program. The project archeologist shall prepare a draft archeological data recovery plan and submit it to the ERO for review and approval. If the time needed for preparation and review of a comprehensive archeological data recovery plan would result in a significant construction delay, the scope of data recovery may instead be agreed upon in consultation between the project archeologist and the ERO and documented by the project archeologist in a memo to the ERO. The archeological data recovery plan/memo shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the archeological data recovery plan/memo will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resource that would not otherwise be disturbed by construction if nondestructive methods are practical.</p> <p>The archeological data recovery plan shall include the following elements:</p> <ul style="list-style-type: none"> Field Methods and Procedures: Descriptions of proposed field strategies, procedures, and operations 	

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		<ul style="list-style-type: none"> ● Cataloguing and Laboratory Analysis: Description of selected cataloguing system and artifact analysis procedures ● Discard Policy: Description of and rationale for field and post-field discard and deaccession policies ● Security Measures: Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities ● Report of Data Recovery Results: Description of proposed report format and distribution of results ● Public Interpretation: Description of potential types of interpretive products and locations of interpretive exhibits based on consultation with project sponsor ● Curation: Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities <p>The project archeologist shall implement the archeological data recovery program upon approval of the archeological data recovery plan/memo by the ERO.</p> <p>Coordination of Archeological Data Recovery Investigations. In cases in which the same resource has been or is being affected by another project for which data recovery has been conducted, is in progress, or is planned, the following measures shall be implemented to maximize the scientific and interpretive value of the data recovered from both archeological investigations:</p> <ul style="list-style-type: none"> ● In cases where an investigation has not yet begun, project archeologists for each project impacting the same resource and the ERO, as applicable, shall consult on coordinating and collaborating on archeological research design, data recovery methods, analytical methods, reporting, curation and interpretation to ensure consistent data recovery and treatment of the resource. ● In cases where archeological data recovery investigation is under way or has been completed for a project, the project archeologist for the subsequent project shall consult with the prior project archeologist, if available; review prior treatment plans, 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>findings and reporting; and inspect and assess existing archeological collections/inventories from the site prior to preparation of the archeological treatment plan for the subsequent discovery, and shall incorporate prior findings in the final report for the subsequent investigation. The objectives of this coordination and review of prior methods and findings shall be to identify refined research questions; determine appropriate data recovery methods and analyses; assess new findings relative to prior research findings; and integrate prior findings into subsequent reporting and interpretation.</p> <p>Treatment of Human Remains and Funerary Objects. If human remains or suspected human remains are encountered during construction, the contractor and project sponsor shall ensure that ground-disturbing work within 50 feet of the remains is halted immediately and shall arrange for the protection in place of the remains until appropriate treatment and disposition have been agreed upon and implemented in accordance with this measure. The treatment of any human remains and funerary objects discovered during any soil- disturbing activity shall comply with applicable state laws, including Health and Safety Code section 7050.5 and Public Resources Code section 5097.98. Upon determining that the remains are human, the project archeologist shall immediately notify the Medical Examiner of the City and County of San Francisco, the ERO, and the project sponsor of the find.</p> <p>If the remains cannot be permanently preserved in place, the landowner or designee shall consult with the most likely descendant and may consult with the project archeologist, project sponsor and the ERO on recovery of the remains and any scientific treatment alternatives. The landowner shall then make all reasonable efforts to develop a burial agreement (agreement) with the most likely descendant, as expeditiously as possible, for the treatment and disposition, with appropriate dignity, of human remains and funerary objects (as detailed in CEQA Guidelines section 15064.5(d)). Per Public Resources Code section 5097.98(c)(1), the agreement shall address, as applicable and to the degree consistent with the wishes of the most likely descendant, the appropriate excavation, removal, recordation, scientific analysis, custodianship prior to reinternment or curation, and final disposition of the human remains and funerary objects. If the most likely descendant agrees to scientific analyses of the remains and/or funerary objects,</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>the project archeologist shall retain possession of the remains and funerary objects until completion of any such analyses, after which the remains and funerary objects shall be reinterred or curated as specified in the agreement.</p> <p>If the landowner or designee and the most likely descendant are unable to reach an agreement on scientific treatment of the remains and/or funerary objects, the ERO, in consultation with the project sponsor shall ensure that the remains and/or funerary objects are stored securely and respectfully until they can be reinterred on the project site, with appropriate dignity, in a location not subject to further or future subsurface disturbance, in accordance with the provisions of state law.</p> <p>Treatment of historic-period human remains and/or funerary objects discovered during any soil-disturbing activity shall be in accordance with protocols laid out in the research design in the project archeological monitoring plan, archeological testing plan, archeological data recovery plan, and other relevant agreements established between the project sponsor, medical examiner, and the ERO. The project archeologist shall retain custody of the remains and associated materials while any scientific study scoped in the treatment document is conducted and the remains shall then be curated or respectfully reinterred by arrangement on a case-by case-basis.</p> <p>Cultural Resources Public Interpretation Plan and Land Acknowledgement. If a significant archeological resource (i.e., a historical resource or unique archeological resources as defined by CEQA Guidelines section 15064.5) is identified and the ERO determines in consultation with Native American representatives for Native American archeological resources, that the public interpretation is warranted, the project archeologist shall prepare a Cultural Resources Public Interpretation Plan. The Cultural Resources Public Interpretation Plan shall describe the interpretive products, locations or distribution of interpretive materials or displays, the proposed content and materials, the producers or artists of the displays or installation, and a long-term maintenance program.</p> <p>If the resource to be interpreted is a tribal cultural resource, the department shall notify Native American tribal representatives that public interpretation is being planned. If requested by tribal representatives, the Cultural Resources Public Interpretation Plan shall be prepared in consultation with and developed with the participation of Native</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>American tribal representatives. For public projects or projects that include dedicated public spaces, the interpretive materials may include an acknowledgement that the project is located upon traditional Ohlone lands. For interpretation of a tribal cultural resource, the interpretive program may include a combination of artwork, preferably by local Native American artists, educational panels or other informational displays, a plaque, or other interpretative elements including digital products that address Native American experience and the layers of history. As feasible, and where landscaping is proposed, the interpretive effort may include the use and the interpretation of native and traditional plants incorporated into the proposed landscaping.</p> <p>The project archeologist shall submit the cultural resources public interpretation plan and drafts of any interpretive materials that are subsequently prepared to the ERO for review and approval. The project sponsor shall ensure that the cultural resources public interpretation plan is implemented prior to occupancy of the project.</p> <p>Archeological Resources Report. If significant archeological resources, as defined by CEQA Guidelines section 15064.5, are encountered, the project archeologist shall submit a confidential draft Archeological Resources Report to the ERO. This report shall evaluate the significance of any discovered archeological resource, describe the archeological and historical research methods employed in the archeological programs undertaken, the results and interpretation of analyses, and discuss curation arrangements.</p> <p>Once approved by the ERO, the project archeologist shall distribute the approved Archeological Resources Report as follows: copies that meet current information center requirements at the time the report is completed to the California Archeological Site Survey Northwest Information Center, and a copy of the transmittal of the approved Archeological Resources Report to the Northwest Information Center to the ERO; one bound hardcopy of the Archeological Resources Report, along with digital files that include an unlocked, searchable PDF version of the Archeological Resources Report, GIS shapefiles of the site and feature locations, any formal site recordation forms (CA DPR 523 series), and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources, via USB or other stable storage device, to the environmental planning division of the planning department; and, if a descendant</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>group was consulted, a digital or hard copy of the Archeological Resources Report to the descendant group, depending on their preference.</p> <p>Curation. If archeological data recovery is undertaken, the project archeologist and the project sponsor shall ensure that any significant archeological collections and paleoenvironmental samples of future research value shall be permanently curated at an established curatorial facility. The facility shall be selected in consultation with the ERO. Upon submittal of the collection for curation the project sponsor or archeologist shall provide a copy of the signed curatorial agreement to the ERO.</p> <p>Mitigation Measure M-CR-2b: Archeological Monitoring Program.</p> <p>If required based on the outcome of preliminary archeological review conducted by department staff, to avoid and mitigate impacts from the proposed action on significant archeological resources found during construction, the project archeologist shall develop and implement an archeological monitoring program as specified herein, and shall conduct an archeological testing and/or data recovery program if required to address archeological discoveries or the assessed potential for archeological discoveries, pursuant to this measure and Mitigation Measure M-CR-2a.</p> <p>Qualified Archeologist Identification. After the first project approval action or as directed by the environmental review officer (ERO), the project sponsor shall contact the department archeologist to obtain the names and contact information for three qualified archeological consultants on the department’s list of qualified archeological consultants, and shall retain one of those archeological consultants (“project archeologist”) to develop and implement an archeological monitoring program under the direction of the ERO.</p> <p>Construction Crew Archeological Awareness. Prior to any soil-disturbing activity, the project archeologist shall conduct a brief on-site archeological awareness training that describes the types of resources that might be encountered and how they might be recognized, and requirements and procedures for work stoppage, resource protection and notification in the event of a potential archeological discovery. The project archeologist also shall distribute an “Alert” wallet card (based on the department’s “ALERT” sheet) to all field personnel (e.g., machine operators, field crew, pile drivers,</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>supervisory personnel) involved in soil disturbing activities, which summarizes stop work requirements and provides information on how to contact the project archeologist and ERO. The project archeologist shall repeat the training at intervals during construction, as determined necessary by the ERO, including when new construction personnel start work and prior to periods of soil disturbing work when the project archeologist will not be on site.</p> <p>Tribal Cultural Resources Sensitivity Training. In addition to the archeological awareness training, for sites at which the ERO has determined that there is the potential for the discovery of Native American archeological resources or if requested by a tribe pursuant to the department’s tribal cultural resources notification process, the project sponsor shall ensure that a Native American representative is afforded the opportunity to provide a Native American cultural resources sensitivity training to all construction personnel.</p> <p>Archeological Monitoring Program. Based on the results of information provided in the preliminary archeological review and additional historical research as needed, the project archeologist shall consult with the ERO prior to the commencement of any project-related soils disturbing activities to determine the appropriate scope of archeological monitoring, allowing for required document preparation and review time. The archeological monitoring program shall be set forth in an Archeological Monitoring Plan, as detailed below.</p> <p>The project archeologist shall be present on the project site according to a schedule agreed upon by the project archeologist and the ERO until the ERO has, in consultation with the project archeologist, determined that project construction activities could have no effects on significant archeological deposits. The project archeologist shall prepare a daily monitoring log documenting activities and locations monitored, soil disturbance depth, stratigraphy, and findings.</p> <p>The project archeologist has the authority to temporarily stop soil disturbing construction activity in the vicinity of a suspected find to document the resource, collect samples as needed, and assess its significance. The project sponsor shall ensure that the find is protected in place in accordance with the archeologist’s direction, and that it remains protected until the archeologist, after consultation with the ERO, notifies the</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>project sponsor that assessment and any subsequent mitigation are complete. The project sponsor shall also ensure that the construction foreperson or other on-site delegee, is aware of the stop work and protection requirements.</p> <p>In the event of a discovery of a potentially significant archeological resources during monitoring or construction, the project archeologist shall conduct preliminary testing of the discovery, including the collection of soil samples and artifactual/ ecofactual material, as needed to assess potential significance and integrity. Once this initial assessment has been made, the project archeologist shall consult with the ERO on the results of the assessment. If the resource is assessed as potentially significant, the project sponsor shall ensure that soil disturbance remains halted at the discovery location until appropriate treatment has been determined in consultation with the ERO and implemented, as detailed below.</p> <p>Archeological Monitoring Plan. The archeological monitoring plan shall include the following provisions:</p> <ul style="list-style-type: none"> • Project Description: Description of all anticipated soil disturbing activities (e.g., foundation and utility demolition, hazardous soils remediation, site grading, shoring excavations, piles or soil improvements, and foundation, elevator, car stacker, utility, and landscaping excavations), with project plans and profiles, as needed, to illustrate the anticipated soil disturbance. • Site Specific Environmental and Cultural Context: Pre-contact and historic environmental and cultural setting of the project site as pertains to potential Native American use and historic period development; any available information pertaining to subsequent soil disturbance, current knowledge of soil stratigraphy. As appropriate based on the scale and scope of the project, the Archeological Monitoring Plan should include historic maps, as a basis for predicting resource types that might be encountered and their potential locations. An overlay of the project site on the city’s prehistoric sensitivity model mapping should be included, as should the locations of all known archeological sites within 0.25 mile of the project site. • Anticipated Resources or Resource Types: Likely resources that might be encountered and at what locations and depths, based on known resources in the 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>vicinity, the site’s predevelopment setting and development history, and the anticipated depth and extent of project soil disturbances.</p> <ul style="list-style-type: none"> ● Proposed Scope of Archeological Monitoring: Include soil-disturbing activities/ disturbance depths to be monitored. ● Synopsis of Required Procedures: For the assessment and treatment of discoveries, ERO and Native American consultation requirements; burial treatment procedures; and reporting and curation requirements, consistent with the specifications of Mitigation Measure M-CR-2a. <p>Resource Evaluation and Treatment Determination. Upon discovery of a suspected archeological resource during construction or archeological monitoring, Mitigation Measure M-CR-2a’s Resource Evaluation and Treatment Determination stipulations shall be implemented as specified in that measure.</p> <p>Additional Applicable Measures. If a significant archeological resource is identified, and data recovery is required under Mitigation Measure M-CR-2a’s Resource Evaluation and Treatment Determination stipulations, the following additional measures identified in the Mitigation Measure M-CR-2a shall be implemented as specified in that measure:</p> <ul style="list-style-type: none"> ● Archeological Data Recovery Program ● Treatment of Human Remains and Funerary Objects (as applicable) ● Coordination of Archeological Data Recovery Investigations ● Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable) ● Archeological Resources Report ● Curation <p>Mitigation Measure M-CR-2c: Archeological Testing Program.</p> <p>If required based on the outcome of preliminary archeological review conducted by department staff, to avoid and mitigate impacts from the proposed action on significant archeological resources found during construction, the project archeologist shall develop</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>and implement an archeological testing program as specified herein, and shall conduct an archeological monitoring and/or data recovery program if required to address archeological discoveries or the assessed potential for archeological discoveries, pursuant to this measure and Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance.</p> <p>Qualified Archeologist Identification. After the first project approval action or as directed by the ERO, the project sponsor shall contact the department archeologist to obtain the names and contact information for the next three qualified archeological consultants on the department’s list and shall retain a qualified archeologist (hereinafter “project archeologist”) from this list of three to develop and implement the archeological testing program.</p> <p>Construction Crew Archeological Awareness. Prior to any soils-disturbing activities being undertaken, the project archeologist shall conduct a brief on-site archeological awareness training that describes the types of resources that might be encountered and how they might be recognized, and requirements and procedures for work stoppage, resource protection and notification in the event of a potential archeological discovery. The project archeologist also shall distribute an “Alert” wallet card, based on the department’s “ALERT” sheet, that summarizes stop work requirements and provides necessary contact information for the project archeologist, project sponsor and the to all field personnel involved in soil disturbing activities, including machine operators, field crew, pile drivers, supervisory personnel, etc., have received. The project archeologist shall repeat the training at intervals during construction, as determined necessary by the ERO, including when new construction personnel start work and prior to periods of soil disturbing work when the project archeologist will not be on site.</p> <p>Tribal Cultural Resources Sensitivity Training. In addition to and concurrently with the archeological awareness training, for sites at which the ERO has determined that there is the potential for the discovery of Native American archeological resources or if requested by a tribe pursuant to the department’s tribal cultural resources notification process, the project sponsor shall ensure that a Native American representative is afforded the opportunity to provide a Native American cultural resources sensitivity training to all construction personnel.</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Archeological Testing Program. The project archeologist shall develop and undertake an archeological testing program as specified herein to determine to the extent possible the presence or absence of archeological resources in areas of project soil disturbance and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required to address archeological discoveries or the assessed potential for archeological discoveries, pursuant to this measure.</p> <p>Archeological Testing Plan. The project archeologist shall consult with the ERO reasonably prior to the commencement of any project-related soils disturbing activities to determine the appropriate scope of archeological testing. The archeological testing program shall be conducted in accordance with an approved Archeological Testing Plan, prepared by the project archeologist consistent with the approved scope of work. The Archeological Testing Plan shall be submitted first and directly to the ERO for review and comment and shall be considered a draft subject to revision until final approval by the ERO. Project-related soils disturbing activities shall not commence until the testing plan has been approved and any testing scope to occur in advance of construction has been completed. The project archeologist shall implement the testing as specified in the approved Archeological Testing Plan prior to and/or during construction.</p> <p>The Archeological Testing Plan shall include the following:</p> <ul style="list-style-type: none"> ● Project Description: Description of all anticipated soil disturbing activities, with locations and depths of disturbance, including foundation and utility demolition, hazardous soils remediation, site grading, shoring excavations, piles or soil improvements, and foundation, elevator, car stacker, utility and landscaping excavations, with project plans and profiles, as needed, to illustrate the locations of anticipated soil disturbance. ● Site Specific Environmental and Cultural Context: Pre-contact and historic environmental and cultural setting of the project site as pertinent to potential Native American use and historic period development, any available information pertaining to past soil disturbance; soils information, such as stratigraphic and water table data 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>from prior geotechnical testing. As appropriate based on the scale and scope of the project, the Archeological Testing Plan should include historic maps as a basis for predicting resource types that might be encountered and their potential locations. An overlay of the project site on the city’s prehistoric sensitivity model mapping should be included, as should the locations of all known archeological sites within 0.25 mile of the project site.</p> <ul style="list-style-type: none"> • Brief Research Design: Scientific/historical research questions applicable to the expected resource(s), what data classes potential resources may be expected to possess, and how the expected data classes would address the applicable research questions. • Anticipated Resources or Resource Types: Likely resources that might be encountered and at what locations and depths, based on known resources in the vicinity, the site’s predevelopment setting and development history, and the anticipated depth and extent of project soil disturbances. • Proposed Scope of Archeological Testing and Rationale: Testing methods to be used (e.g., coring, mechanical trenching, manual excavation, or combination of methods); locations and depths of testing in relation to anticipated project soil disturbance; strata to be investigated; any uncertainties on stratigraphy that would affect locations or depths of tests and might require archeological monitoring of construction excavations subsequent to testing. • Resource Documentation and Significance Assessment Procedures: ERO and Native American consultation requirements upon making a discovery; pre-data recovery assessment process, burial treatment procedures, and reporting and curation requirements, consistent with the specifications of Mitigation Measure M-CR-2a. <p>Archeological Testing Results Memo. Irrespective of whether archeological resources are discovered, the project archeologist shall submit a written summary of the findings to the ERO at the completion of the archeological testing program. The findings report/memo shall describe each resource, provide an initial assessment of the integrity and significance of encountered archeological deposits encountered during testing, and provide recommendations for subsequent treatment of any resources encountered.</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Resource Evaluation and Treatment Determination. Upon discovery of a suspected archeological resource during construction or archeological testing, Mitigation Measure M-CR-2a’s Resource Evaluation and Treatment Determination stipulations shall be implemented as specified in that measure.</p> <p>Additional Applicable Measures. If a significant archeological resource is identified, and data recovery is required under Mitigation Measure M-CR-2a’s Resource Evaluation and Treatment Determination stipulations, the following additional measures identified in the Mitigation Measure M-CR-2a shall be implemented as specified in that measure:</p> <ul style="list-style-type: none"> ● Archeological Data Recovery Program ● Treatment of Human Remains and Funerary Objects (as applicable) ● Coordination of Archeological Data Recovery Investigations ● Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable) ● Archeological Resources Report ● Curation <p>Mitigation Measure M-CR-2d. Treatment of Submerged and Deeply Buried Resources.</p> <p>This measure applies to projects that would include subgrade excavation to depths that would penetrate to native soil or below Young Bay Mud, or entail the use of piles, soil improvements or other deep foundations in landfill areas within former creeks, ponds, bay marshes or waters of the bay that may be sensitive for submerged or buried historical or Native American archeological resources; and shall be implemented in the event of the discovery of a submerged or deeply buried resource during archeological testing, archeological monitoring, or soil-disturbing construction activities that occur when an archeologist is not present.</p> <p>In addition to the measures detailed below, for any project during which a significant archeological resource is identified, a preservation or treatment determination shall be made consistent with the provisions of Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance. If data</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>recovery is required, the following additional measures identified in measure M-CR-2a shall be implemented, as specified in that measure:</p> <ul style="list-style-type: none"> ● Archeological Data Recovery Program ● Treatment of Human Remains and Funerary Objects (as applicable) ● Coordination of Archeological Data Recovery Investigations ● Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable) ● Archeological Resources Report ● Curation <p>The following additional measures shall be undertaken upon discovery of a potentially significant deeply buried or submerged resource to minimize significant effects from deep project excavations, soil improvements, pile construction, or construction of other deep foundation systems, in cases where the environmental review officer (ERO) has determined through consultation with the project sponsor, and with tribal representatives as applicable, that preservation –in place—the preferred mitigation— is not a feasible or effective option.</p> <p>Submerged or Buried Resource Treatment Determination. If the resource cannot feasibly or adequately be preserved in place, documentation and/or archeological data recovery shall be conducted, as described in Mitigation Measure M-CR-2a. However, by definition, submerged or deeply buried resources sometimes are located deeper than the maximum anticipated depth of project excavations, such that the resource would not be exposed for investigation, and/or under water or may otherwise pose substantial access, safety or other logistical constraints for data recovery; or the cost of providing archeological access to the resource may demonstrably be prohibitive.</p> <p>In circumstances where the constraints identified above limit physical access for documentation and data recovery, the ERO, project sponsor, project archeologist, and tribal representative (for Native American archeological resources), shall consult to explore alternative documentation and treatment options to be implemented in concert</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>with any feasible archeological data recovery. The appropriate treatment elements, which would be expected to vary with the type of resource and the circumstances of discovery, shall be identified by the ERO based on the results of consultation from among the treatment measures listed below. Additional treatment options may be developed and agreed upon through consultation if it can be demonstrated that they would be equally or more effective in recovering or amplifying the value of the data recovered from physical investigation of the affected resources by addressing applicable archeological research questions and in disseminating data and meaningfully interpreting the resource to the public.</p> <p>Each treatment option below, or a combination of the treatment measures, in concert with any feasible standard data recovery methods applied as described above, would be effective in mitigating significant impacts to submerged and buried resources. The ERO, in consultation with the project archeologist and project sponsor, shall identify which of these measures that, individually or in combination, will be applicable and effective in recovering sufficient data, enhancing the research value of the data recovery, meaningfully interpreting the resource to the public, or otherwise effectively mitigating the loss of data or associations that will result from project construction. Multiple treatment measures shall be adopted in combination, as needed to adequately mitigate data loss and, as applicable, impacts to tribal cultural values, as determined in consultation with the ERO and, as applicable, tribal representatives.</p> <p>The project archeologist shall document the results of the treatment program consultation with respect to the agreed upon scope of treatment in a treatment program memo, for ERO review and approval. Upon approval by the ERO, the project sponsor shall ensure that treatment program is implemented prior to and during construction, as applicable. Reporting, interpretive, curation and review requirements are the same as delineated under the other cultural resources mitigation measures that are applicable to the project, as noted above. The project sponsor shall be responsible for ensuring the implementation of all applicable mitigation measures, as identified in the treatment program memo.</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p><i>Treatment Options</i></p> <ul style="list-style-type: none"> • <u>Remote Archeological Documentation.</u> Where a historic feature cannot be recovered or adequately accessed in place by the archeologist due to size, bulk or inaccessibility, the archeologist shall conduct all feasible remote documentation methods, such as 3-D photography using a remote access device, remote sensing (e.g., ground penetrating radar with a low range (150 or 200 MHz) antenna), or other appropriate technologies and methods, to document the resource and its context. The project sponsor and contractor shall support remote archeological documentation as needed, by assisting with equipment access (e.g., drone, lights and camera or laser scanner mounted on backhoe); providing personnel qualified to enter the excavation to facilitate remote documentation; and accommodating training of construction personnel by the project archeologist so that they can assist in measuring or photographing the resource from inside the excavation in cases when the archeologist cannot enter. • <u>Modification of Contractor’s Excavation Methods.</u> At the request of the ERO, the project sponsor shall consult with the project archeologist and the ERO to identify potential modifications to the contractor’s excavation and shoring methods to facilitate data recovery to prevent damage to the resource before it has been documented, to assist in exposure and facilitate observation and documentation, and to assist in data recovery. Examples include improved dewatering during excavation, use of a smaller excavator bucket or toothless bucket, providing a location where spoils can be spread out and examined by the archeologist prior to being offhauled, and phasing or benching of deep excavations to facilitate observation and/or deeper archeological trenching. • <u>Data Recovery through Open Excavation.</u> If a project will include mass excavation to the depth of the buried/submerged deposit, archeological data recovery shall include manual (preferred) or controlled mechanical sampling of the deposit. If project construction would not include mass excavation to the depth of the deposit but would impact the deposit through deep foundation systems or soil improvements, the ERO and the project sponsor shall consult to consider whether there are feasible means of providing direct archeological access to the deposit (e.g., 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>excavation of portion of the site that overlies the deposit to the subject depth so that a sample can be recovered). The feasibility consideration shall include an estimate of the project cost of excavating to the necessary depth and of providing shoring and dewatering sufficient to allow archeological access to the deposit for manual or mechanical recovery.</p> <ul style="list-style-type: none"> <p><u>Mechanical Recovery.</u> If site circumstances limit access by archeologists to the find, the ERO, project archeologist, and project sponsor shall consult on the feasibility of mechanically removing the feature/ deposit or portion of it intact for off-site documentation and analysis, preservation, and interpretive use. The consultation above shall include consideration as to whether such recovery is logistically feasible and can be accomplished without major data loss. The specific means and methods and the type and size of the sample shall be identified, and the recovery shall be implemented as determined feasible by the ERO. The project sponsor shall assist with mechanical recovery and transport and curation of recovered materials and shall provide for an appropriate and secure off-site location for archeological documentation and storage as needed.</p> <p><u>Salvage of Historic Materials.</u> Samples or sections of historical features that cannot be preserved in place (e.g., structural members of piers or wharves, sections of wooden sea wall, rail alignments, or historic utility or paving features of particular data value or interpretive interest) shall be tested for contamination and, if not contaminated, shall be salvaged for interpretive use or other reuse, such as display of a reconstructed resource; use of timbers or planks for site furniture and signage structures; installation in publicly accessible open spaces; or other uses of public interest. Historic wood and other salvageable historic structural material not used for interpretation shall be recovered for reuse, consistent with the San Francisco Ordinance No. 27-06, which requires recycling or reuse of all construction and demolition debris material removed from a project. If the project has the potential to encounter such features, the project sponsor shall plan in advance for reuse of salvaged historic materials to the greatest extent feasible, including identification of a location for interim storage and identification of potential users and reuses.</p> 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> • <u>Data Recovery Using Geoarcheological Cores.</u> If it is deemed infeasible to expose a significant deposit resource for archeological data recovery, geoarcheological coring of the identified deposit shall be conducted at horizontal grid intervals of no greater than 15 feet within areas that will be impacted by project construction. The maximum feasible core diameter shall be used for data recovery coring. The objective of coring is to obtain a minimum of a five percent sample of the estimated total volume of the resource within areas that will be impacted by project construction. However, due to the small size of each core, this method alone generally cannot recover a 5 percent sample volume or a sufficient quantity of data to adequately characterize the range of activities that took place at the site. For this reason, if the coring sample constitutes less than five percent of the estimated total volume of the archeological deposit that will be directly impacted by project construction, the project sponsor may elect implementation of one or more of the following additional compensatory measures to amplify the value of the recovered data. • <u>Compensatory Treatment Measures:</u> <ul style="list-style-type: none"> – <i>Scientific Analysis of Data from Comparable Archeological Sites/ “Orphaned Collections.”</i> The ERO and the project archeologist shall consult to identify a known archeological site or historical feature, or curated collections or samples recovered during prior investigation of similar sites or features are available for further analysis; and for which site-specific or comparative analyses would be expected to provide data relevant to the interpretation or context reconstruction for the affected site. Examples would include reanalysis or comparative analysis of artifacts or archival records; faunal or paleobotanical analyses; dating; isotopes studies; or such other relevant studies based on the research design developed for the affected site and on data sets available from the impacted resource and comparative collections. The scope of analyses shall be determined by the ERO based on consultation with the project archeologist, the project sponsor and, for sites of Native American origin Native American representatives. – <i>Additional Off-Site Data Collection and/or Analysis for Historical and Paleoenvironmental Reconstruction.</i> The ERO and project archeologist shall identify existing geoarcheological data and geotechnical coring records on file 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>with the city; and/or cores extracted and preserved during prior geotechnical or geoarcheological investigations that could contribute to reconstruction of the environmental setting in the vicinity of the identified resource, to enhance the historical and scientific value of recovered data by providing additional data about Native American archeological environmental setting and stratigraphic sensitivity; and/or provide information pertinent to the public interpretation of the significant resource. Relevant data may also be obtained through geoarcheological coring at accessible sites identified by the ERO through consultation with San Francisco public agencies and private project sponsors.</p> <p>Mitigation Measure M-TCR-1: Tribal Notification and Consultation. (See below)</p>	
<p>Impact CR-3: The proposed action has the potential to disturb human remains, including those interred outside of formal cemeteries.</p>	S	<p>Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance and, as applicable, Mitigation Measure M-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources. (See above)</p> <p>Mitigation Measure M-TCR-1: Tribal Notification and Consultation. (See Section 4.3, Tribal Cultural Resources, and below)</p>	LTSM
<p>Impact C-CR-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to historical resources, as defined in CEQA Guidelines section 150.64.5.</p>	S	<p>Mitigation Measure M-CR-1a: Avoid or Minimize Effects on Identified Built Environment Resources; Mitigation Measure M-CR-1b: Best Practices and Construction Monitoring Program for Historic Resources; Mitigation Measure M-CR-1c: Relocation Plan; Mitigation Measure M-CR-1d: Documentation; Mitigation Measure M-CR-1e: Oral History; Mitigation Measure M-CR-1f: Salvage Plan; Mitigation Measure M-CR-1g: Interpretation; Mitigation Measure M-CR-1h: Historic Context; Mitigation Measure M-CR-1i: Walking or Building Tour; Mitigation Measure M-CR-1j: Educational Program; Mitigation Measure M-CR-1k: Community Memorial Event; Mitigation Measure M-CR-1l: Revise Historic District Documentation.</p>	SUM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		(See above) Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction. (See Section 4.5, Noise and Vibration, and below)	
Impact C-CR-2: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to archeological resources and human remains.	S	Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance and, as applicable, Mitigation Measure M-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources. (See above) Mitigation Measure M-TCR-1: Tribal Notification and Consultation. (See Section 4.3, Tribal Cultural Resources, and below)	LTSM
Tribal Cultural Resources			
Impact TCR-1: The proposed action would result in a substantial adverse change to an archeological tribal cultural resource.	S	Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance and, as applicable, Mitigation Measure M-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources. (See Section 4.2, Cultural Resources, and above) Mitigation Measure M-TCR-1: Tribal Notification and Consultation. Applicability: This measure applies to both archeological tribal cultural resources and non-archeological tribal cultural resources. This measure shall be implemented for the following types of future development consistent with the proposed action:	LTSM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> • For each project for which preliminary archeological review, conducted by department archeologists, identifies the potential for impacts on a Native American archeological resource, which is presumed to be a tribal cultural resource, and • At the initiation of planning for public interpretation of a significant Native American archeological resource, and • For projects with one or more of the following characteristics where the project is located in an area identified as a potential tribal cultural resource: <ul style="list-style-type: none"> – Development footprint greater than or equal to 10,000 square feet and any soil disturbance greater than or equal to 10 feet deep – Use of piles or other deep foundation or deep soil improvements – Total soil excavation volume in excess of 1,500 cubic yards – Development for which the city requires the inclusion of public open space, public art, or other public interpretative programs – Development that includes habitat restoration, creek daylighting, or channelization that could affect native plants – Development for which the department requires a streetscape plan under the Better Streets Plan (planning code section 138.1) <p>Notification. The department shall distribute a notification for projects that meet any of the characteristics above to parties on its local Native American tribal distribution list, including the Association of Ramaytush Ohlone and other interested Ohlone parties list. The notification shall include the project description; project location; anticipated depth and extent of soil disturbance necessary for construction; information on changes to public access, removal or addition of native plantings or habitat, and any proposed public interpretation, as relevant; the conclusions of the preliminary archeological review regarding potential impacts on Native American archeological tribal cultural resources; anticipated next steps, including proposed archeological identification and/or treatment for archeological tribal cultural resources; an invitation to consult on the project; and a</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>timeline for requesting consultation, which is within 30 days after receipt of a notification.</p> <p>Consultation. The department and project sponsor shall ensure that Native American tribal representatives who respond to the notification shall be provided the opportunity to consult on the proposed project. Consultation shall follow requirements identified in CEQA section 21080.3.2; if the Native American tribal representatives request consultation regarding alternatives to the project, recommended mitigation measures, or significant effects, the consultation shall include those topics. Consultation meetings shall occur primarily between department staff members and Native American representatives, with department staff members coordinating with the project sponsor. Project sponsors may join in consultation meetings if requested and agreed to by the Native American representative. Native American representatives shall be provided with project plans and details to review and given an opportunity to provide input with respect to whether the project as designed would affect a tribal cultural resource and, if so, how such an impact might be avoided or mitigated. For archeological tribal cultural resources, the department shall ensure that Native American representatives are informed of the sensitivity of the project site, as assessed by the department, and the presence of any known or discovered resources so that they can provide input on the archeological steps to be implemented, per Mitigation Measures M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance and, as applicable, Mitigation Measure M-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, if requested by those tribal representatives. Additional measures on the treatment of tribal cultural resources may be developed through consultation. Consultation shall be concluded as defined in CEQA section 21080.3.2(b).</p> <p>Site-specific measures identified through consultation to reduce or eliminate impacts would be implemented by the project sponsor in coordination with department staff members. Site-specific measures could include, but would not be limited to:</p> <ul style="list-style-type: none"> • Sampling and paleoenvironmental analysis of soils that would be affected by project piles or excavation for reconstruction of the Native American environmental setting 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> • Native planting and vegetation treatments in publicly accessible open spaces and community gathering areas that emphasize native and/or environmentally sustainable shoreline plants, such as those traditionally used by the Ohlone • Public interpretive exhibits that educate the public and/or reflect tribal cultural heritage and values and address local Native American experience and history • Ohlone land acknowledgements • Public art by local Native American artists • For projects that include public open spaces or onsite public access spaces within the project site (such as a community room), make the spaces available for events organized by the local Native American community, by arrangement with event space organizers • Other educational tools and applications identified by tribal representatives through consultation with the tribe and determined by the environmental review officer (ERO) and the project sponsor to be feasible for inclusion in the project. <p>Different or additional project-specific mitigation measures may be identified through Native American consultation if, in consultation with the tribal representative, the project sponsor, and the ERO, they are determined to be equally effective as or more effective than the measures identified above in mitigating the specific impacts of development on tribal cultural resources.</p> <p>Project-specific mitigation measures applicable to the specific proposal shall be agreed upon by the tribal consultants and the department in coordination with the project sponsor and implemented by the project sponsor, if determined feasible by the ERO.</p> <p>If no tribal group requests consultation but the ERO determines that a proposed project may have a potential significant adverse effect on a tribal cultural resource, based on prior consultation, then the site-specific measures and treatments listed above, as applicable, may be required at the discretion of the ERO.</p> <p>Compensation. Following on the initial tribal consultation, the ERO, project sponsor, and project archeologist, as appropriate, shall work with the tribal representative to identify</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		the scope of work to fulfill the requirements of this mitigation measure, which may include participation in archeological monitoring, preparation and review of deliverables (e.g., plans, interpretive materials, art work). Tribal representatives shall be compensated for their work as identified in the agreed upon scope of work.	
Impact TCR-2: The proposed action would result in a substantial adverse change in the significance of a non-archeological tribal cultural resource.	S	<p>Mitigation Measure M-TCR-1: Tribal Notification and Consultation. (See above)</p> <p>Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance and, as applicable, Mitigation Measure M-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources. (See Section 4.2, Cultural Resources, and above)</p>	LTSM
Impact C-TCR-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact on tribal cultural resources.	S	<p>Mitigation Measure M-TCR-1: Tribal Notification and Consultation. (See above)</p> <p>Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance and, as applicable, Mitigation Measure M-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources. (See Section 4.2, Cultural Resources, and above)</p>	LTSM
Transportation and Circulation			
Impact TR-1: The proposed action would require a substantially extended duration or intense activity due to construction and the secondary effects of that construction could create	S	No feasible mitigation measures available.	SU

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations, or interfere with emergency access or accessibility for people walking or bicycling or substantially delay public transit.			
Impact TR-2: The proposed action would not create potentially hazardous conditions for people walking, bicycling, or driving or public transit operations.	LTS	None required.	NA
Impact TR-3: The proposed action would not interfere with accessibility of people walking or bicycling to and from the project site, and adjoining areas, or result in inadequate emergency access.	LTS	None required.	NA
Impact TR-4: The proposed action would substantially delay public transit.	S	<p>Mitigation Measure M-TR-4a: Parking Maximums and Transportation Demand Management.</p> <p>The city shall reduce vehicle trips from future planning code amendments (e.g., future rezonings or housing sustainability district designations) to implement the proposed action or future development projects that contribute considerably to or result in a significant transit delay impact, as defined in the Housing Element 2022 Update EIR’s transit analysis for future development. This mitigation measure shall not apply to future planning code amendments, or future development projects implementing the proposed action, that do not contribute considerably to or result in a significant transit delay impact.</p>	SUM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>The city may achieve this vehicle trip reduction through one of the following measures A, B, or C:</p> <ul style="list-style-type: none"> ● Measure A: Amend planning code parking maximums for residential uses (sections 151 and 151.1) by a 50 percent or more reduction than such maximums as of April 2022; OR ● Measure B: Amend planning code transportation demand management requirements (section 169) for residential uses or its associated program standards for residential uses by an equivalent amount to achieve the vehicle trip reduction estimated by implementation of a 50 percent reduction in planning code parking maximums, compared to parking maximums as of April 2022; OR ● Measure C: The department shall apply vehicle trip reduction measures A or B on future development projects consistent with the housing element on project-by-project basis until the city amends the planning code consistent with measures A or B. <p><i>Mitigation Measure M-TR-4b: Driveway and Loading Operations Plan and Curb Cut Restrictions.</i></p> <p>The city shall reduce potential conflicts between driveway and loading operations, including passenger and freight loading activities, and people walking, bicycling, riding transit, and driving, from future planning code amendments to implement the proposed action (e.g., future rezonings or housing sustainability district designations) or future development projects that would contribute considerably to or result in a significant transit delay or significant loading impacts, as defined in the Housing Element 2022 Update EIR’s transit and loading analysis for future development. This mitigation measure shall not apply to future planning code amendments, or future development projects implementing the proposed action, that do not contribute considerably to or result in a significant transit delay or significant loading impacts.</p> <p>The city may achieve this through one of the following measures A or B:</p> <ul style="list-style-type: none"> ● Measure A.1: Amend planning code section 155(r) to not permit curb cuts for garage entries, driveways, or other vehicular access to off-street parking or loading along the street(s) of the significant transit delay and significant loading impacts (may not apply to streets with protected center-running transit-only lanes); AND 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> Measure A.2: Amend the geographic applicability of planning code section 155(u) for projects to prepare and implement a Driveway and Loading Operations Plan (DLOP). Applicable projects shall prepare and submit a draft DLOP to the department for their review and approval, in consultation with the SFMTA. The DLOP shall be written in accordance with any guidelines issued by the department and shall respond to any applicable SFMTA curb management plans (e.g., see Mitigation Measure M-TR-6: Curb Management Plans); OR Measure B: The department shall apply measures A.1 and A.2 on a development project by development project basis until the city amends the planning code consistent with measures A.1 and A.2. <p>Mitigation Measure M-TR-4c: Implement Transit Travel Times Measures to Reduce Transit Delay.</p> <p>The city (e.g., SFMTA, department) shall implement measures to reduce transit delay on the Geary and 19th Avenue corridors. This measure shall also apply to other transit corridors where future planning code amendments (e.g., future rezonings or housing sustainability district designations) to implement the proposed action would contribute considerably to or result a significant transit delay impact (thresholds of significance), as defined in the Housing Element 2022 Update EIR.</p> <p>The city will consider the improvements in the below table. The table presents the three levels (i.e., tiers) or transit improvements in terms of infrastructure changes that would be applicable to the different street network types and transit operating characteristics, depending on the nature of transit delay. The Tier 1 and 2 improvements include traffic engineering measures that are consistent with San Francisco’s Muni Forward (such measures may include transit stop changes, traffic lane modifications, parking and turn restrictions, traffic signal and stop sign changes, and pedestrian improvements) and are organized to distinguish between measures that do not restrict private vehicle movements (Tier 1) and those that do restrict private vehicle movements (Tier 2). The Tier 3 improvements are consistent with those major capital projects (e.g., subways) various government agencies are considering as a part of San Francisco’s ConnectSF and Bay Area Rapid Transit and Capitol Corridor Joint Powers Authority Link21.</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation																				
		<p>Table: Improvements to Reduce Transit Delay Based on Street Network and Transit Operating Characteristics</p> <table border="1"> <thead> <tr> <th>Street Network/Transit Operating Characteristics</th> <th>Tier 1 Improvements</th> <th>Tier 2 Improvements</th> <th>Tier 3 Improvements</th> </tr> </thead> <tbody> <tr> <td></td> <td>Transit bulbs, boarding islands, prepaid boarding, stop consolidation, transit signal priority, traffic signals</td> <td>Side-running transit-only or HOV lanes, or protected center-running transit-only lanes</td> <td>Grade separation of transit service (subway)</td> </tr> <tr> <td>Bus routes that operate primarily in mixed-traffic lanes</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Bus routes or light rail lines that operate in a mix of transit-only lanes and mixed-traffic lanes</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>Bus routes or light rail lines that operate primarily in transit-only lanes</td> <td></td> <td>X</td> <td>X</td> </tr> </tbody> </table> <p>Note: The city's selection of which specific transit network improvements to implement as a part of this measure would depend on the future transit network and roadway conditions within the rezoning</p>	Street Network/Transit Operating Characteristics	Tier 1 Improvements	Tier 2 Improvements	Tier 3 Improvements		Transit bulbs, boarding islands, prepaid boarding, stop consolidation, transit signal priority, traffic signals	Side-running transit-only or HOV lanes, or protected center-running transit-only lanes	Grade separation of transit service (subway)	Bus routes that operate primarily in mixed-traffic lanes	X	X	X	Bus routes or light rail lines that operate in a mix of transit-only lanes and mixed-traffic lanes	X	X	X	Bus routes or light rail lines that operate primarily in transit-only lanes		X	X	
Street Network/Transit Operating Characteristics	Tier 1 Improvements	Tier 2 Improvements	Tier 3 Improvements																				
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Bus routes or light rail lines that operate in a mix of transit-only lanes and mixed-traffic lanes	X	X	X																				
Bus routes or light rail lines that operate primarily in transit-only lanes		X	X																				

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>area. If transit is not already protected, the city would start with tier 1 improvements and move toward tier 2 and then tier 3 when these features are already in place.</p> <p>The city shall implement measures consistent with Muni Forward and ConnectSF plans, studies, and toolkits to reduce transit delay associated with traffic congestion and passenger boarding. The city may develop transit network improvement plans for routes that would be affected by future planning code amendments to implement the proposed action, which could include identifying the specific measures and implementation timing of the measures. Potential measures could include, but are not limited to, those shown in the table above.</p> <p>The city shall identify the specific measures within two years of the final approval of any future planning code amendments (e.g., future rezonings or housing sustainability district designations) to implement the proposed action that will exceed the thresholds of significance.</p> <p>Additionally, the city shall make every effort to seek and obtain new funding sources to fund transit delay improvements identified in the above table. This may include increasing the existing transportation sustainability fee or assessing a new transit impact fees to future development projects consistent with the proposed action as part of future planning code amendments. This may also include seeking applicable state or federal funding sources.</p> <p>Mitigation Measure M-TR-6: Curb Management Plans. (See below)</p>	
Impact TR-5: The proposed action would not cause substantial additional VMT or substantially induce automobile travel.	LTS	None required.	NA
Impact TR-6: The proposed action could result in a loading deficit and the secondary effects could create	S	Mitigation Measure M-TR-4b: Driveway and Loading Operations Plan and Curb Cut Restrictions.	SUM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<p>potentially hazardous conditions for people walking, bicycling, or driving; or substantially delay public transit.</p>		<p>(See above)</p> <p>Mitigation Measure M-TR-6: Curb Management Plans.</p> <p>The SFMTA shall develop a curb management plan(s) for the geographic area(s) under future planning code amendments (e.g., future rezonings or housing sustainability district designations) to implement the proposed action that result in significant loading impacts as defined in the Housing Element 2022 Update EIR’s loading analysis for future development. The SFMTA shall develop the plan to be consistent with the recommendations in the SFMTA’s adopted Curb Management Strategy. Such a plan may include, but would not be limited to, components such as identifying the necessary curb regulations based on curb function priorities and parking and loading needs, and issues related to transit, accessibility, and safety.</p> <p>The SFMTA shall develop the plan within two years after the department has received project applications under future planning code amendments to implement the proposed action that cumulatively total greater than 200,000 gross square feet in the plan’s geographic area. The SFMTA shall implement applicable components of the plan prior to the city’s issuance of certificate of occupancy for the project applications. Project sponsors for project applications for individual development projects may also implement applicable components of the plan, including if identified with any driveway and loading operations guidelines issued by the department. The SFMTA shall monitor conditions in the geographic area and update the plan, as needed.</p>	
<p>Impact TR-7: The proposed action would not result in a parking deficit.</p>	LTS	None required.	NA
<p>Impact C-TR-1: The proposed action, in combination with cumulative projects, would result in significant construction-related transportation impacts, and the</p>	S	No feasible mitigation available.	SU

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
proposed action would contribute considerably to those impacts.			
Impact C-TR-2: The proposed action, in combination with cumulative projects, would not create potentially hazardous conditions, would not interfere with accessibility; would not cause substantial additional VMT or substantially induce automobile travel; and would not result in significant parking impacts.	LTS	None required.	NA
Impact C-TR-3: The proposed action, in combination with cumulative projects, would substantially delay public transit, and the proposed action would contribute considerably to those impacts.	S	<p>Mitigation Measure M-TR-4a: Parking Maximums and Transportation Demand Management; Mitigation Measure M-TR-4b: Driveway and Loading Operations Plan and Curb Cut Restrictions; and Mitigation Measure M-TR-4c: Implement Transit Travel Times Measures to Reduce Transit Delay.</p> <p>(See above)</p> <p>Mitigation Measures M-TR-4a through M-TR-4c would reduce or minimize the severity of transit delay associated with future development. However, due to the uncertainty about the adoption of these measures and their effectiveness to fully reduce impacts, it is not likely that these measures would reduce the transit delay impacts to less-than-significant levels.</p>	SUM
Impact C-TR-4: The proposed action, in combination with cumulative projects, could result in significant cumulative loading impacts, and the proposed action could contribute considerably to those impacts.	S	<p>Mitigation Measure M-TR-4b: Driveway and Loading Operations Plan and Curb Cut Restrictions; and Mitigation Measure M-TR-6: Curb Management Plans.</p> <p>(See above)</p> <p>Mitigation Measures M-TR-4b and M-TR-6 would reduce or minimize the severity of loading impacts associated with future development. However, due to the uncertainty related to the adoption and effectiveness of these measures to fully reduce impacts, it is</p>	SUM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		not likely that these measures would reduce the loading impacts to less-than-significant levels.	
Noise and Vibration			
Impact NO-1: Construction of future development consistent with the proposed action would generate a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	S	<p>Mitigation Measure M-NO-1: Construction Noise Control.</p> <p>The project sponsor shall submit a project-specific construction noise control plan to the environmental review officer (ERO) for approval prior to issuance of any demolition or building permit. The construction noise control plan shall be prepared by a qualified acoustical engineer, with input from the construction contractor, and include all feasible measures to reduce construction noise. The construction noise control plan shall identify noise control measures to ensure that construction noise levels shall not exceed 90 dBA 1-hour L_{eq}, 10 dBA above the ambient noise level, nor an interior level of 45 dBA during nighttime hours at noise sensitive receptors (residences, hospitals, convalescent homes, schools, churches, hotels, and motels). The project sponsor shall ensure that requirements of the construction noise control plan are included in contract specifications.</p> <p>If nighttime construction is required, the plan shall include specific measures to reduce nighttime construction noise. The plan shall also include measures for notifying the public of construction activities, complaint procedures, and a plan for monitoring construction noise levels in the event complaints are received.</p> <p>The construction noise control plan shall include the following measures to the degree feasible, or other effective measures, to reduce construction noise levels:</p> <ul style="list-style-type: none"> • Use construction equipment that is in good working order, and inspect mufflers for proper functionality; • Select “quiet” construction methods and equipment (e.g., improved mufflers, use of intake silencers, engine enclosures); • Use construction equipment with lower noise emission ratings whenever possible, particularly for air compressors; • Prohibit the idling of inactive construction equipment for more than five minutes; 	SUM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> • Locate stationary noise sources (such as compressors) as far from nearby noise sensitive receptors as possible, muffle such noise sources, and construct barriers around such sources and/or the construction site. • Avoid placing stationary noise-generating equipment (e.g., generators, compressors) within noise-sensitive buffer areas (as determined by the acoustical engineer) immediately adjacent to neighbors. • Enclose or shield stationary noise sources from neighboring noise-sensitive properties with noise barriers to the extent feasible. To further reduce noise, locate stationary equipment in pit areas or excavated areas, if feasible; and • Install temporary barriers, barrier-backed sound curtains and/or acoustical panels around working powered impact equipment and, if necessary, around the project site perimeter. When temporary barrier units are joined together, the mating surfaces shall be flush with each other. Gaps between barrier units, and between the bottom edge of the barrier panels and the ground, shall be closed with material that completely closes the gaps, and dense enough to attenuate noise. <p>The construction noise control plan shall include the following measures for notifying the public of construction activities, complaint procedures and monitoring of construction noise levels:</p> <ul style="list-style-type: none"> • Designation of an on-site construction noise manager for the project; • Notification of neighboring noise sensitive receptors within 300 feet of the project construction area at least 30 days in advance of high-intensity noise-generating activities (e.g., pier drilling, pile driving, and other activities that may generate noise levels greater than 90 dBA at noise sensitive receptors) about the estimated duration of the activity; • A sign posted on-site describing noise complaint procedures and a complaint hotline number that shall always be answered during construction; • A procedure for notifying the planning department of any noise complaints within one week of receiving a complaint; 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> • A list of measures for responding to and tracking complaints pertaining to construction noise. Such measures may include the evaluation and implementation of additional noise controls at sensitive receptors; and • Conduct noise monitoring (measurements) at the beginning of major construction phases (e.g., demolition, grading, excavation) and during high-intensity construction activities to determine the effectiveness of noise attenuation measures and, if necessary, implement additional noise control measures. <p>The construction noise control plan shall include the following additional measures during pile-driving activities:</p> <ul style="list-style-type: none"> • When pile driving is to occur within 600 feet of a noise-sensitive receptor, implement “quiet” pile-driving technology (such as pre-drilling of piles, sonic pile drivers, auger cast-in-place, or drilled-displacement, or the use of more than one pile driver to shorten the total pile-driving duration [only if such measure is preferable to reduce impacts to sensitive receptors]) where feasible, in consideration of geotechnical and structural requirements and conditions; • Where the use of driven impact piles cannot be avoided, properly fit impact pile driving equipment with an intake and exhaust muffler and a sound-attenuating shroud, as specified by the manufacturer; and • Conduct noise monitoring (measurements) before, during, and after the pile driving activity. 	
<p>Impact NO-2: Operation of the proposed action would generate noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.</p>	<p>S</p>	<p>Mitigation Measure M-TR-4a: Parking Maximums and Transportation Demand Management. (See above)</p> <p>Mitigation Measure M-NO-2: Noise Analysis and Attenuation. The project sponsor shall undertake a detailed noise analysis of noise-generating activities or equipment (e.g., heating, ventilation, and air-conditioning equipment;</p>	<p>SUM</p>

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>outdoor gathering areas; places of entertainment). This analysis shall be conducted prior to the first project approval action.</p> <p>This analysis shall include a site survey to identify potential noise-sensitive uses (residences, hospitals, convalescent homes, schools, churches, hotels and motels) and include at least one 24-hour noise measurement to determine ambient noise levels throughout the day and nighttime hours.</p> <p>The analysis shall be prepared by persons qualified in acoustical analysis and/or engineering and shall demonstrate with reasonable certainty that the proposed use would not adversely affect nearby noise-sensitive uses, would not substantially increase ambient noise levels, and would not result in a noise level in excess of any applicable standards, such as those in section 2909 of the noise ordinance. All recommendations from the acoustical analysis necessary to ensure that noise sources would meet applicable requirements of the noise ordinance and/or not result in substantial increases in ambient noise levels shall be incorporated into the building design and operations. Should concerns remain regarding potential excessive noise, completion of a detailed noise control analysis (by a person qualified in acoustical analysis and/or engineering), and incorporation of noise reduction measures (including quieter equipment, construction of barriers or enclosures, etc.) into the building design and operations prior to the first project approval action shall be required. Acoustical treatments may include, but are not limited to:</p> <ul style="list-style-type: none"> • Enclosing noise-generating mechanical equipment • Installing relatively quiet models of air handlers, exhaust fans, and other mechanical equipment • Using mufflers or silencers on equipment exhaust fans • Orienting or shielding equipment to protect noise sensitive receptors to the greatest extent feasible • Increasing the distance between noise-generating equipment and noise-sensitive receptors 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> Placing barriers around the equipment to facilitate the attenuation of noise 	
<p>Impact NO-3: Construction of future development consistent with the proposed action would generate excessive groundborne vibration.</p>	<p>S</p>	<p>Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction.</p> <p>Prior to issuance of any demolition or building permit, the project sponsor shall submit a project-specific Pre-construction Survey and Vibration Management and Monitoring Plan to the ERO or the ERO’s designee for approval. The plan shall identify all feasible means to avoid damage to potentially affected buildings. The project sponsor shall ensure that the following requirements of the Pre-Construction Survey and Vibration Management and Monitoring Plan are included in contract specifications, as necessary.</p> <p>Pre-construction Survey. Prior to the start of any ground-disturbing activity, the project sponsor shall engage a consultant to undertake a pre-construction survey of potentially affected buildings. If potentially affected buildings and/or structures are not potentially historic, a structural engineer or other professional with similar qualifications shall document and photograph the existing conditions of the potentially affected buildings and/or structures. The project sponsor shall submit the survey to the ERO or the officer’s designee for review and approval prior to the start of vibration-generating construction activity.</p> <p>If nearby affected buildings are potentially historic, the project sponsor shall engage a qualified historic preservation professional and a structural engineer or other professional with similar qualifications to undertake a pre-construction survey of potentially affected historic buildings. The pre-construction survey shall include descriptions and photograph of all identified historic buildings including all façades, roofs, and details of the character-defining features that could be damaged during construction, and shall document existing damage, such as cracks and loose or damaged features (as allowed by property owners). The report shall also include pre-construction drawings that record the pre-construction condition of the buildings and identify cracks and other features to be monitored during construction. The qualified historic preservation professional shall be the lead author of the pre-construction survey if historic buildings and/or structures could be affected by the project. The pre-</p>	<p>LTSM</p>

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>construction survey shall be submitted to the ERO for review and approval prior to the start of vibration-generating construction activity.</p> <p>Vibration Management and Monitoring Plan. The project sponsor shall undertake a monitoring plan to avoid or reduce project-related construction vibration damage to adjacent buildings and/or structures and to ensure that any such damage is documented and repaired. Prior to issuance of any demolition or building permit, the project sponsor shall submit the Plan to the ERO for review and approval.</p> <p>The Vibration Management and Monitoring Plan shall include, at a minimum, the following components, as applicable:</p> <ul style="list-style-type: none"> ● Maximum Vibration Level. Based on the anticipated construction and condition of the affected buildings and/or structures on adjacent properties, a qualified acoustical/vibration consultant in coordination with a structural engineer (or professional with similar qualifications) and, in the case of potentially affected historic buildings/structures, a qualified historic preservation professional, shall establish a maximum vibration level that shall not be exceeded at each building/structure on adjacent properties, based on existing conditions, character-defining features, soil conditions, and anticipated construction practices (common standards are a peak particle velocity [PPV] of 0.25 inch per second for historic and some old buildings, a PPV of 0.3 inch per second for older residential structures, and a PPV of 0.5 inch per second for new residential structures and modern industrial/commercial buildings). ● Vibration-generating Equipment. The plan shall identify all vibration-generating equipment to be used during construction (including, but not limited to: site preparation, clearing, demolition, excavation, shoring, foundation installation, and building construction). ● Alternative Construction Equipment and Techniques. The plan shall identify potential alternative equipment and techniques that could be implemented if construction vibration levels are observed in excess of the established standard (e.g., drilled shafts [caissons] could be substituted for driven piles, if feasible, based on soil conditions, or smaller, lighter equipment could be used in some cases). 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> ● Pile Driving Requirements. For projects that would require pile driving, the project sponsor shall incorporate into construction specifications for the project a requirement that the construction contractor(s) use all feasible means to avoid or reduce damage to potentially affected buildings. Such methods may include one or more of the following: <ul style="list-style-type: none"> – Incorporate “quiet” pile-driving technologies into project construction (such as drilled shafts, using sonic pile drivers, auger cast-in-place, or drilled-displacement), as feasible; and/or – Ensure appropriate excavation shoring methods to prevent the movement of adjacent structures. ● Buffer Distances. The plan shall identify buffer distances to be maintained based on vibration levels and site constraints between the operation of vibration-generating construction equipment and the potentially affected building and/or structure to avoid damage to the extent possible. ● Vibration Monitoring. The plan shall identify the method and equipment for vibration monitoring to ensure that construction vibration levels do not exceed the established standards identified in the plan. <ul style="list-style-type: none"> – Should construction vibration levels be observed in excess of the standards established in the plan, the contractor(s) shall halt construction and put alternative construction techniques identified in the plan into practice, to the extent feasible. – The qualified historic preservation professional (for effects on historic buildings and/or structures) and/or structural engineer (for effects on historic and non-historic buildings and/or structures) shall inspect each affected building and/or structure (as allowed by property owners) in the event the construction activities exceed the vibration levels identified in the plan. – The structural engineer and/or historic preservation professional shall submit monthly reports to the ERO during vibration-inducing activity periods that 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>identify and summarize any vibration level exceedances and describe the actions taken to reduce vibration.</p> <ul style="list-style-type: none"> - If vibration has damaged nearby buildings and/or structures that are not historic, the structural engineer shall immediately notify the ERO and prepare a damage report documenting the features of the building and/or structure that has been damaged. - If vibration has damaged nearby buildings and/or structures that are historic, the historic preservation consultant shall immediately notify the ERO and prepare a damage report documenting the features of the building and/or structure that has been damaged. - Following incorporation of the alternative construction techniques and/or planning department review of the damage report, vibration monitoring shall recommence to ensure that vibration levels at each affected building and/or structure on adjacent properties are not exceeded. <ul style="list-style-type: none"> • Periodic Inspections. The plan shall identify the intervals and parties responsible for periodic inspections. The qualified historic preservation professional (for effects on historic buildings and/or structures) and/or structural engineer (for effects on historic and non-historic buildings and/or structures) shall conduct regular periodic inspections of each affected building and/or structure on adjacent properties (as allowed by property owners) during vibration-generating construction activity on the project site. The plan will specify how often inspections shall occur. • Repair Damage. The plan shall also identify provisions to be followed should damage to any building and/or structure occur due to construction-related vibration. The building(s) and/or structure(s) shall be remediated to their pre-construction condition (as allowed by property owners) at the conclusion of vibration-generating activity on the site. For historic resources, should damage occur to any building and/or structure, the building and/or structure shall be restored to its pre-construction condition in consultation with the qualified historic preservation professional and planning department preservation staff. 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>Vibration Monitoring Results Report. After construction is complete the project sponsor shall submit to the ERO a final report from the qualified historic preservation professional (for effects on historic buildings and/or structures) and/or structural engineer (for effects on historic and non-historic buildings and/or structures). The report shall include, at a minimum, collected monitoring records, building and/or structure condition summaries, descriptions of all instances of vibration level exceedance, identification of damage incurred due to vibration, and corrective actions taken to restore damaged buildings and structures. The ERO shall review and approve the Vibration Monitoring Results Report.</p> <p>Mitigation Measure M-NO-3b: Prevent Interference with Vibration-Sensitive Equipment.</p> <p>Prior to construction, the project sponsor and its contractors shall designate and make available a community liaison to respond to vibration complaints from occupants at the building containing vibration-sensitive equipment. Through the community liaison, the project sponsor’s team shall provide notification to property owners and occupants of the building at least 10 days prior to construction activities involving equipment that can generate vibration capable of interfering with vibration-sensitive equipment, informing them of the estimated start date and duration of vibration-generating construction activities. If feasible, the project sponsor team shall identify potential alternative equipment and techniques that could reduce construction vibration levels. For example, alternative equipment and techniques may include, but are not limited to:</p> <ul style="list-style-type: none"> ● Pre-drilled piles ● Caisson drilling ● Oscillating or rotating pile installation ● Jetting piles into place using a water injection at the tip of the pile could be substituted for driven piles, if feasible, based on soil conditions ● Static rollers could be substituted for vibratory rollers in some cases <p>If concerns are raised prior to construction or complaints received during construction related to equipment interference, the community liaison shall work with the project</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		sponsor’s team and the affected building occupants to resolve the concerns. Vibration control measures shall meet the performance target (i.e., threshold of 65 VdB for vibration-sensitive equipment) set forth by the Federal Transit Administration. To resolve concerns raised by building occupants, the community liaison shall convey the details of the complaints to the project sponsor team, planning department, and the complainant. The liaison shall convey the details of the measures being implemented to ensure that the vibration level is not exceeded. These measures may include evaluation by a qualified noise and vibration consultant; scheduling certain construction activities outside the hours of operation for vibration-sensitive equipment or when specific vibration-sensitive equipment is in use, if feasible; and/or conducting groundborne vibration monitoring to document that an individual project can meet the performance target of 65 VdB at specific distances or locations. Groundborne vibration monitoring, if appropriate to resolve concerns, shall be conducted by a qualified noise and vibration consultant.	
Impact C-NO-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative construction noise impact.	S	Mitigation Measure M-NO-1: Construction Noise Control. (See above)	SUM
Impact C-NO-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative operational noise impact.	LTS	None required.	NA
Air Quality			
Impact AQ-1: The proposed action would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<p>Impact AQ-2: The proposed action would result in a cumulatively considerable net increase in criteria pollutants for which the project region is in nonattainment status under an applicable federal or state ambient air quality standard.</p>	S	<p>Mitigation Measure M-TR-4a: Parking Maximums and Transportation Demand Management.</p> <p>(See Section 4.4, Transportation and Circulation, and above)</p> <p>No other feasible mitigation available.</p>	SUM
<p>Impact AQ-3: Construction of future development consistent with the proposed action would result in a cumulatively considerable net increase in non-attainment criteria pollutant emissions.</p>	S	<p>Mitigation Measure M-AQ-3: Clean Construction Equipment.</p> <p>The project sponsor shall comply with the following:</p> <p>A. Engine Requirements:</p> <ol style="list-style-type: none"> 1. All off-road equipment greater than 25 horsepower and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either U.S. EPA or air resources board Tier 4 Final off-road emission standards. 2. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. 3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes at any location, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions, safe operating conditions). The project sponsor shall post legible and visible signs in English, Spanish, and Chinese in designated queuing areas and at the construction site to remind operators of the two-minute idling limit. If the majority of the project sponsor’s construction staff speak a language other than these, then the signs shall be posted in that language as well. 4. The project sponsor shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment and require that such 	LTSM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>workers and operators properly maintain and tune equipment in accordance with manufacturers' specifications.</p> <p>5. Any other best available technology in the future may be included, provided that the project sponsor submits documentation to the department demonstrating that (1) the technology would result in emissions reductions and (2) it would not increase other pollutant emissions or result in other additional impacts, such as noise. This may include new alternative fuels or engine technology for off-road or other construction equipment (such as electric or hydrogen fuel cell equipment) that is not available as of 2022.</p> <p>B. Waivers:</p> <p>The environmental review officer (ERO) may waive the requirement of subsection (A)(2) regarding an alternative source of power if an alternative source is limited or infeasible at the project site. If the ERO grants the waiver, the project sponsor must submit documentation that the equipment used for onsite power generation meets the engine requirements of subsection (A)(1).</p> <p>The ERO may waive the equipment requirements of subsection (A)(1) if a particular piece of Tier 4 Final off-road equipment is technically not feasible, the equipment would not produce the desired emissions reduction because of expected operating modes, or a compelling emergency requires the use off-road equipment that is not Tier 4 compliant. In seeking an exception, the project sponsor shall demonstrate that the project shall use the cleanest piece of construction equipment available and feasible and submit documentation that average daily construction emissions of ROG, NOx, PM2.5 would not exceed 54 pounds per day, and PM10 emissions would not exceed 82 pounds per day.</p> <p>C. Construction Emissions Minimization Plan:</p> <p>Before starting onsite construction activities, the project sponsor shall submit a Construction Emissions Minimization Plan (Plan) to the ERO for review and approval. The Plan shall state, in reasonable detail, how the project sponsor will meet the engine requirements of Section A.</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<ul style="list-style-type: none"> • The Plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include, but is not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, engine serial number, and expected fuel use and hours of operation. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used. • The project sponsor shall ensure that all applicable requirements of the Plan have been incorporated into the project sponsor's contract specifications. The Plan shall include a certification statement that the project sponsor agrees to comply fully with the Plan. • The project sponsor shall make the Plan available to the public for review onsite during working hours. The project sponsor shall post at the construction site a legible and visible sign summarizing the Plan. The sign shall also state that the public may ask to inspect the Plan for the project at any time during working hours and shall explain how to request to inspect the Plan. The project sponsor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way. <p>D. Monitoring:</p> <ul style="list-style-type: none"> • After start of construction activities, the project sponsor shall submit reports every six months to the ERO documenting compliance with the Plan. After completion of construction activities and prior to receiving a final certificate of occupancy, the project sponsor shall submit to the ERO a final report summarizing construction activities, including the start and end dates, duration of each construction phase, and the specific information required in the Plan. 	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact AQ-4: The proposed action would not result in a cumulatively considerable net increase in any non-attainment criteria pollutant during operations.	LTS	None required.	NA
Impact AQ-5: The proposed action would expose sensitive receptors to substantial levels of fine particulate matter (PM _{2.5}) and toxic air contaminants.	S	<p>Mitigation Measure M-AQ-3: Clean Off-Road Construction Equipment. (See above)</p> <p>Mitigation Measure M-TR-4a: Parking Maximums and Transportation Demand Management. (See Section 4.4, Transportation and Circulation, and above)</p> <p>Mitigation Measure M-AQ-5: Best Available Control Technology for Diesel Engines. All diesel engines used for building operations shall have engines that meet U.S. EPA (1) Tier 4 Final emissions standards, (2) Tier 4 interim emissions standards, or (3) Tier 2 or Tier 3 emission standards and are equipped with an air resources board Level 3 verified diesel emissions control strategy. For each new diesel engine submitted for future projects subject to this mitigation measure, including any associated generator pads, engine and filter specifications shall be submitted to the ERO for review and approval prior to issuance of a permit for the engine from the building department. Once operational, all diesel generators shall be maintained in good working order in perpetuity, and any future replacement for the diesel engines shall be required to be consistent with emissions specifications. The operator of the facility shall maintain records of the testing schedule for each diesel engine for the life of that engine and provide the information for review to the ERO within three months of requesting such information.</p>	SUM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact AQ-6: The proposed action would not result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people.	LTS	None required.	NA
Impact C-AQ-1: The proposed action, in combination with cumulative projects, would expose sensitive receptors to substantial levels of fine particulate matter (PM _{2.5}) and toxic air contaminants under cumulative conditions.	S	Mitigation Measure M-AQ-3: Clean Off-Road Construction Equipment; and Mitigation Measure M-AQ-5: Best Available Control Technology for Diesel Engines. (See above)	SUM
Impact C-AQ-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative odor impact.	LTS	None required.	NA
Wind			
Impact WI-1: The proposed action would create wind hazards in publicly accessible areas of substantial pedestrian use.	S	Mitigation Measure M-WI-1a: Wind Minimization. If the screening-level assessment conducted by the department determines wind tunnel testing is required due to the potential for one or more proposed buildings to create or exacerbate a wind hazard exceedance, such testing shall be conducted by a professionally qualified firm. The proposed buildings tested in the wind tunnel may incorporate wind baffling features or landscaping. Such features must be tested in the wind tunnel and discussed in a wind report in the order of preference discussed below, with the overall intent being to reduce ground-level wind speeds such that the project shall not cause equivalent wind speeds to reach or exceed the 26-mph wind hazard criterion for a single hour of the year in areas of substantial use by people walking (e.g., sidewalks, plazas, building entries, etc.):	SUM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>1. Building Massing. New buildings and additions to existing buildings shall be shaped to minimize ground-level wind speeds. Examples of these shapes include setbacks, stepped façades, and vertical steps in the massing to help disrupt wind flows.</p> <p>2. Wind Baffling Measures on the Building or on the Project Site. Wind baffling measures shall be included on future buildings and/or on the project site to disrupt vertical wind flows along tower façades and through the project site. Examples of these may include staggered balcony arrangements on main tower façades, screens and canopies attached to the buildings, rounded building corners, covered walkways, colonnades, art, free-standing canopies, or wind screens.</p> <p>Only after incorporating all feasible features to reduce wind impacts via building massing and wind baffling, and documenting any such features deemed infeasible shall the following be considered:</p> <p>3. Landscaping on or off the Project Site and/or Wind Baffling Measures in the Public Right-of-Way. Landscaping and/or wind baffling measures shall be installed in the public right-of-way to slow winds along sidewalks and protect places where people walking are expected to gather or linger. Landscaping and/or wind baffling measures shall be installed on the windward side (i.e., the direction from which the wind is blowing) of the areas of concern. Examples of wind baffling measures may include street art to provide a sheltered area for people to walk and free-standing canopies and wind screens in areas where people walking are expected to gather or linger. If landscaping on or off the project site or wind baffling measures in the public right-of-way are required as one of the features to mitigate wind impacts, Mitigation Measure M-WI-1b shall also apply.</p> <p>Mitigation Measure M-WI-1b: Maintenance Plan for Landscaping on or off the Project Site and Wind Baffling Measures in the Public Right-of-Way.</p> <p>If it is determined infeasible to fully mitigate wind hazards via massing and wind baffling measures on the subject building pursuant to Mitigation Measure M-WI-1a1 and M-WI-1a2, the project sponsor shall prepare a maintenance plan for review and approval by the department to ensure maintenance of the features required pursuant to Mitigation Measure M-WI-1a3 in perpetuity. The maintenance plan shall also be reviewed and</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		approved by public works for landscaping or wind baffling measures in the public right-of-way.	
Impact C-WI-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative wind impact.	LTS	None required.	NA
Shadow			
Impact SH-1: The proposed action would create new shadow that would substantially and adversely affect the use and enjoyment of publicly accessible open spaces.	S	<p>Mitigation Measure M-SH-1: Shadow Minimization.</p> <p>If it is determined that a future project consistent with the housing element update would create new shadow that would substantially and adversely affect the use and enjoyment of publicly accessible open space, the project sponsor shall redesign the proposed project to reduce or avoid significant shadow impacts to the extent feasible, as determined by the environmental review officer (ERO). Redesign could include changes to building height, massing, and/or orientation.</p>	SUM
Impact C-SH-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative shadow impact.	LTS	None required.	NA
Utilities and Service Systems			
Impact UT-1: Sufficient water supplies would be available to serve projected growth in normal, dry, and multiple dry years without implementation of the Bay Delta Plan Amendment. If the Bay Delta Plan Amendment is implemented,	S	<p>No feasible mitigation available.</p> <p>These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-</p>	SU

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<p>the SFPUC would require rationing and could develop new or expanded water supply facilities to address shortfalls in single and multiple dry years. Environmental impacts related to new or expanded water supply facilities and increased rationing would result in significant and unavoidable environmental impacts.</p>		<p>CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.</p>	
<p>Impact UT-2: The proposed action would require or result in the relocation or construction of new or expanded wastewater treatment or stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.</p>	S	<p>These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.</p>	SUM
<p>Impact UT-3: The proposed action would require or result in the relocation or construction of new or expanded electric power or telecommunication facilities, the</p>	S	<p>These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological</p>	LTSM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
<p>construction or relocation of which could cause significant environmental effects.</p>		<p>Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.</p>	
<p>Impact UT-4: The proposed action would result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments.</p>	S	<p>These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.</p>	SUM
<p>Impact UT-5: The proposed action would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair</p>	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
attainment of solid waste reduction goals.			
Impact UT-6: The proposed action would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	LTS	None required.	NA
Impact C-UT-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to the wastewater and stormwater collection and treatment system.	LTS	None required.	NA
Impact C-UT-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to electric and telecommunication facilities.	LTS	None required.	NA
Impact C-UT-3: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to solid waste facilities and regulations.	LTS	None required.	NA

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
Paleontological Resources			
Impact GE-5: The proposed action would directly or indirectly destroy a unique paleontological resource or site.	S	<p>Mitigation Measure M-GE-5: Inadvertent Discovery of Paleontological Resources during Construction.</p> <p>Worker Awareness Training – Prior to commencing construction, and ongoing throughout ground-disturbing activities (e.g., excavation, utility installation), the project sponsor and/or their designee shall engage a qualified paleontologist meeting the standards specified by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology 2010) to train all project construction workers regarding how to recognize paleontological resources and on the contents of the paleontological resources alert sheet, as provided by the department. The paleontological resources alert sheet shall be prominently displayed at the construction site during ground-disturbing activities for reference regarding potential paleontological resources. In addition, the paleontologist shall inform the project sponsor, contractor, and construction personnel of the immediate stop work procedures and other procedures to be followed if bones or other potential fossils are unearthed at the project site. Should new workers that will be involved in ground-disturbing construction activities begin employment after the initial training has occurred, the construction supervisor shall ensure that they receive the worker awareness training as described above.</p> <p>The paleontologist shall complete the standard form/affidavit confirming the timing of the worker awareness training and submit it to the environmental review officer (ERO). The affidavit shall confirm the project’s location, the date of training, the location of the informational handout display, and the number of participants. The affidavit shall be transmitted to the ERO within five business days of conducting the training.</p> <p>Paleontological Resource Discoveries - In the event of the discovery of an unanticipated paleontological resource during project construction, ground-disturbing activities shall temporarily be halted within 25 feet of the find until the discovery is examined by a qualified paleontologist as recommended by the Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 2010) and best practices in mitigation paleontology (Murphey et al. 2019). The paleontologist shall consult the ERO. Work</p>	LTSM

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		<p>within the sensitive area shall resume only when deemed appropriate by the qualified paleontologist in consultation with the ERO.</p> <p>The qualified paleontologist shall determine 1) if the discovery is scientifically significant; 2) the necessity for involving other responsible or resource agencies and stakeholders, if required or determined applicable; and 3) methods for resource recovery. If a paleontological resource assessment results in a determination that the resource is not scientifically important, this conclusion shall be documented in a paleontological evaluation letter to demonstrate compliance with applicable statutory requirements (e.g., Federal Antiquities Act of 1906, CEQA Guidelines section 15064.5, Public Resources Code Chapter 17, section 5097.5, Paleontological Resources Preservation Act 2009). The paleontological evaluation letter shall be submitted to the ERO for review within 30 calendar days of the discovery.</p> <p>If in consultation with the ERO the qualified paleontologist determines that a paleontological resource is of scientific importance, the qualified paleontologist shall make a recommendation as to what action, if any, is warranted and prepare a paleontological mitigation program. The mitigation program shall include measures to fully document the resource of scientific importance. The qualified paleontologist shall submit the mitigation program to the ERO for review and approval within ten business days of the discovery. Upon approval by the ERO, ground-disturbing activities in the project area shall resume and be monitored as determined by the qualified paleontologist for the duration of such activities.</p> <p>The mitigation program shall include: 1) procedures for construction monitoring at the project site; 2) fossil preparation and identification procedures; 3) curation of paleontological resources of scientific importance into an appropriate repository; and 4) preparation of a Paleontological Resources Report (report or paleontology report) at the conclusion of ground-disturbing activities. The report shall include dates of field work, results of monitoring, fossil identifications to the lowest possible taxonomic level, analysis of the fossil collection, a discussion of the scientific significance of the fossil collection, conclusions, locality forms, an itemized list of specimens, and a repository receipt from the curation facility. The project sponsor shall be responsible for the preparation and implementation of the mitigation program, in addition to any costs</p>	

Environmental Impacts	Level of Significance before Mitigation	Mitigation Measures	Level of Significance after Mitigation
		necessary to prepare and identify collected fossils, and for any curation fees charged by the paleontological repository. The paleontology report shall be submitted to the ERO for review within 30 business days from conclusion of ground-disturbing activities, or as negotiated following consultation with the ERO.	
Impact C-GE-2: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to paleontological resources.	S	<p>Mitigation Measure M-GE-5: Inadvertent Discovery of Paleontological Resources during Construction.</p> <p>(See above)</p>	LTSM

Source: ICF, 2022.

Notes: LTS = less than significant; LTSM = less than significant with mitigation; SUM = significant and unavoidable with mitigation; SU = significant and unavoidable

Table S-2: Comparison of the Environmental Impacts of the Proposed Action to the Impacts of the Eastside, Preservation, and Dispersed Growth Alternatives, and Plan Bay Area 2050

	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Land Use and Planning					
Physically Divide Existing Communities	Impact LU-1: The proposed action would not physically divide an established community. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Conflict with Land Use Plans	Impact LU-2: The proposed action would not cause a significant physical environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Land Use	Impact C-LU-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative land use impact. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Aesthetics					
Scenic Vista	Impact AE-1: The proposed action would not have a substantial adverse effect on a scenic vista. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Damage Scenic Resources	Impact AE-2: The proposed action would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (LTS)	Similar to the proposed action. (LTS)	Reduced compared to the proposed action (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

LTS = less than significant; LTSM = less than significant with mitigation; SUM = significant and unavoidable with mitigation;
SU = significant and unavoidable;

bold text = impact of the alternative is reduced or more than the impact of the proposed action

	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Conflict with Zoning and Scenic Quality Regulations	Impact AE-3: The proposed action would not conflict with applicable zoning and other regulations governing scenic quality. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Light and Glare	Impact AE-4: The proposed action would not create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Aesthetics	Impact C-AE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative aesthetic impact. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Population and Housing					
Population Growth	Impact PH-1: The proposed action would not induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Replacement Housing	Impact PH-2: The proposed action would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Population and Housing	Impact C-PH-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact from unplanned population growth or displacement. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Cultural Resources					
Built-Environment Historic Resources	Impact CR-1: The proposed action would cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5. (SUM)	More than the proposed action. (SUM)	Reduced compared to the proposed action. (SUM)	More than the proposed action. (SUM)	More than the proposed action. (SUM)
Archeological Resources	Impact CR-2: The proposed action has the potential to cause a substantial adverse change in the significance of an archeological resource pursuant to section 15064.5. (LTSM)	More than the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)	More than the proposed action. (LTSM)
Human Remains	Impact CR-3: The proposed action has the potential to disturb human remains, including those interred outside of formal cemeteries. (LTSM)	More than the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)	More than the proposed action. (LTSM)
Cumulative Built-Environment Historic Resources	Impact C-CR-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to historical resources, as defined in CEQA Guidelines section 150.64.5. (SUM)	More than the proposed action. (SUM)	Reduced compared to the proposed action. (SUM)	More than the proposed action. (SUM)	More than the proposed action. (SUM)
Cumulative Archeological Resources and Human Remains	Impact C-CR-2: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to archeological resources and human remains. (LTSM)	More than the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)	More than the proposed action. (LTSM)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Tribal Cultural Resources					
Archeological Tribal Cultural Resources	Impact TCR-1: The proposed action would result in a substantial adverse change to an archeological tribal cultural resource. (LTSM)	More than the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)	More than the proposed action. (LTSM)
Non-Archeological Tribal Cultural Resources	Impact TCR-2: The proposed action would result in a substantial adverse change in the significance of a non-archeological tribal cultural resource. (LTSM)	More than the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)	More than the proposed action. (LTSM)
Cumulative Tribal Consultation Resources	Impact C-TCR-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact on tribal cultural resources. (LTSM)	More than the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)	More than the proposed action. (LTSM)
Transportation and Circulation					
Construction-related potentially hazardous conditions, accessibility, or substantially delay public transit	Impact TR-1: The proposed action would require a substantially extended duration or intense activity due to construction and the secondary effects of that construction could create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations, or interfere with emergency access or accessibility for people walking or bicycling or substantially delay public transit. (SU)	More than the proposed action. (SU)	Similar to the proposed action. (SU)	More than the proposed action. (SU)	More than the proposed action. (SU)
Potentially Hazardous Conditions	Impact TR-2: The proposed action would not create potentially hazardous conditions for people walking, bicycling, or driving or public transit operations. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

LTS = less than significant; LTSM = less than significant with mitigation; SUM = significant and unavoidable with mitigation;
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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Accessibility	Impact TR-3: The proposed action would not interfere with accessibility of people walking or bicycling to and from the project site, and adjoining areas, or result in inadequate emergency access. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Public Transit Delay	Impact TR-4: The proposed action would substantially delay public transit. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)
Vehicle Miles Traveled (VMT)/Induced Automobile Travel	Impact TR-5: The proposed action would not cause substantial additional VMT or substantially induce automobile travel. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Loading	Impact TR-6: The proposed action could result in a loading deficit and the secondary effects could create potentially hazardous conditions for people walking, bicycling, or driving; or substantially delay public transit. (SUM)	More than the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)	More than the proposed action. (SUM)
Parking	Impact TR-7: The proposed action would not result in a parking deficit. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Construction-Related Transportation	Impact C-TR-1: The proposed action, in combination with cumulative projects, would result in significant construction-related transportation impacts, and the proposed action would contribute considerably to those impacts. (SU)	More than the proposed action. (SU)	Similar to the proposed action. (SU)	More than the proposed action. (SU)	More than the proposed action. (SU)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Cumulative Potentially Hazardous Conditions, Accessibility, VMT, and Parking	Impact C-TR-2: The proposed action, in combination with cumulative projects, would not create potentially hazardous conditions, would not interfere with accessibility; would not cause substantial additional VMT or substantially induce automobile travel; and would not result in significant parking impacts. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Public Transit Delay	Impact C-TR-3: The proposed action, in combination with cumulative projects, would substantially delay public transit, and the proposed action would contribute considerably to those impacts. (SUM)	More than the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)	More than the proposed action. (SUM)
Cumulative Loading	Impact C-TR-4: The proposed action, in combination with cumulative projects, could result in significant cumulative loading impacts, and the proposed action could contribute considerably to those impacts. (SUM)	More than the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)	More than the proposed action. (SUM)
Noise and Vibration					
Construction Noise	Impact NO-1: Construction of future development consistent with the proposed action would generate a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Operational Noise	Impact NO-2: Operation of the proposed action would generate noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)
Construction Vibration	Impact NO-3: Construction of future development consistent with the proposed action would generate excessive groundborne vibration. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)
Cumulative Construction Noise	Impact C-NO-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative construction noise impact. (SUM)	More than the proposed action. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)
Cumulative Operational Noise	Impact C-NO-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative operational noise impact. (LTS)	More than the proposed action. (SUM)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	More than the proposed action. (SUM)
Air Quality					
Conflict with Clean Air Plan	Impact AQ-1: The proposed action would not conflict with or obstruct implementation of the applicable air quality plan. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Criteria Air Pollutants – Proposed Action	Impact AQ-2: The proposed action would result in a cumulatively considerable net increase in criteria pollutants for which the project region is in nonattainment status under an applicable federal or state ambient air quality standard. (SUM)	Reduced compared to the proposed action. (LTS)	Similar to the proposed action. (SUM)	Reduced compared to the proposed action. (LTS)	Reduced compared to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Criteria Air Pollutants – Future Development (Construction)	Impact AQ-3: Construction of future development consistent with the proposed action would result in a cumulatively considerable net increase in non-attainment criteria pollutant emissions. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)
Criteria Air Pollutants – Future Development (Operation)	Impact AQ-4: The proposed action would not result in a cumulatively considerable net increase in any non-attainment criteria pollutant during operations. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
PM _{2.5} and TACs	Impact AQ-5: The proposed action would expose sensitive receptors to substantial levels of fine particulate matter (PM _{2.5}) and toxic air contaminants. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)
Odors	Impact AQ-6: The proposed action would not result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative PM _{2.5} and TACs	Impact C-AQ-1: The proposed action, in combination with cumulative projects, would expose sensitive receptors to substantial levels of fine particulate matter (PM _{2.5}) and toxic air contaminants under cumulative conditions. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	More than the proposed action. (SUM)
Cumulative Odors	Impact C-AQ-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative odor impact. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Greenhouse Gas Emissions					
Greenhouse Gas (GHG) Emissions	Impact GHG-1: The proposed action would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Conflict with GHG Plans	Impact GHG-2: The proposed action would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Wind					
Wind in Outdoor Public Areas	Impact WI-1: The proposed action would create wind hazards in publicly accessible areas of substantial pedestrian use. (SUM)	Reduced compared to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Reduced compared to the proposed action. (SUM)	Similar to the proposed action. (SUM)
Cumulative Wind in Outdoor Public Areas	Impact C-WI-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative wind impact. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Shadow					
Publicly Accessible Open Space	Impact SH-1: The proposed action would create new shadow that would substantially and adversely affect the use and enjoyment of publicly accessible open spaces. (SUM)	Reduced compared to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Reduced compared to the proposed action. (SUM)	More than the proposed action. (SUM)
Cumulative Publicly Accessible Open Space	Impact C-SH-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative shadow impact. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Recreation					
Use of Facilities	Impact RE-1: The proposed action would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	More than the proposed action. (LTS)
Construction of Recreational Facilities	Impact RE-2: The proposed action would not include recreational facilities but would require the construction or expansion of recreational facilities that would have an adverse physical effect on the environment. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)
Cumulative Recreation Impacts	Impact C-RE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on recreation. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	More than the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Utilities and Service Systems					
Water Supply	Impact UT-1: Sufficient water supplies would be available to serve projected growth in normal, dry, and multiple dry years without implementation of the Bay Delta Plan Amendment. If the Bay Delta Plan Amendment is implemented, the SFPUC would require rationing and could develop new or expanded water supply facilities to address shortfalls in single and multiple dry years. Environmental impacts related to new or expanded water supply facilities and increased rationing would result in significant and unavoidable environmental impacts. (SU)	Similar to the proposed action. (SU)	Similar to the proposed action. (SU)	Similar to the proposed action. (SU)	More than the proposed action. (SU)
Expansion of Wastewater Treatment or Stormwater Drainage Facilities	Impact UT-2: The proposed action would require or result in the relocation or construction of new or expanded wastewater treatment or stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects. (SUM)	Reduced compared to the proposed action. (LTS)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)
Expansion of Electric Power or Telecommunication Facilities	Impact UT-3: The proposed action would require or result in the relocation or construction of new or expanded electric power or telecommunication facilities, the construction or relocation of which could cause significant environmental effects. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)

LTS = less than significant; LTSM = less than significant with mitigation; SUM = significant and unavoidable with mitigation;
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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Wastewater Treatment Capacity	Impact UT-4: The proposed action would result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments. (SUM)	Reduced compared to the proposed action. (LTS)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)	Similar to the proposed action. (SUM)
Solid Waste – Capacity	Impact UT-5: The proposed action would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair attainment of solid waste reduction goals. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	More than the proposed action. (LTS)
Solid Waste – Regulations	Impact UT-6: The proposed action would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Wastewater and Stormwater	Impact C-UT-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to the wastewater and stormwater collection and treatment system. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Electric and Telecommunications	Impact C-UT-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to electric and telecommunication facilities. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Cumulative Solid Waste	Impact C-UT-3: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to solid waste facilities and regulations. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Public Services					
Fire Services	Impact PS-1: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency medical services. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)
Police Services	Impact PS-2: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for police protection. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)

	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Schools	Impact PS-3: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios or other performance objectives for schools. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)
Libraries	Impact PS-4: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios or other performance objectives for libraries. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)
Parks	Impact PS-5: The proposed action would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for parks. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)

	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Cumulative Public Services	Impact C-PS-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on public services. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Biological Resources					
Candidate, Sensitive, or Special-status Species	Impact BIO-1: The proposed action would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (LTS)	More than the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	More than the proposed action. (LTS)
Riparian Habitat or Other Sensitive Natural Community	Impact BIO-2: The proposed action would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Wetlands	Impact BIO-3: The proposed action would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Migration of native resident or migratory species	Impact BIO-4: The proposed action would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Conflict with Existing Policies	Impact BIO-5: The proposed action would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Biological Resources	Impact C-BIO-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on biological resources. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Geology and Soils					
Surface Fault Rupture, Seismic Ground Shaking, Ground Failure, Liquefaction, Landslides	Impact GE-1: The proposed action would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismically related ground failure, liquefaction, or landslides. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Erosion	Impact GE-2: The proposed action would not result in substantial soil erosion or the loss of topsoil. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Geologic Unit/Unstable Soil	Impact GE-3: The proposed action would not result in a substantial risk of loss, injury, or death involving unstable geologic units or soils or onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Expansive Soils	Impact GE-4: The proposed action would not result in a substantial risk of loss, injury, or death related to expansive soils. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Geology and Soils	Impact C-GE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on geology and soils. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Paleontological Resources					
Paleontological Resources	Impact GE-5: The proposed action would directly or indirectly destroy a unique paleontological resource or site. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	Similar to the proposed action. (LTSM)	More than the proposed action. (LTSM)
Cumulative Paleontological Resources	Impact C-GE-2: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact on paleontological resources. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Hydrology and Water Quality					
Water and Groundwater Quality	Impact HY-1: The proposed action would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Groundwater	Impact HY-2: The proposed action would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Drainage	Impact HY-3: The proposed action would not substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would result in substantial erosion, siltation, or flooding on- or offsite, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite, or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Flooding	Impact HY-4: In flood hazard, tsunami, or seiche zones, the proposed action would not risk a release of pollutants due to project inundation. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Water Quality Control Plan or Groundwater Management Plan	Impact HY-5: The proposed action would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Cumulative Hydrology	Impact C-HY-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on hydrology and water quality. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Hazards and Hazardous Materials					
Transit and Disposal	Impact HAZ-1: The proposed action would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Upset and Accidental Conditions	Impact HAZ-2: The proposed action would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Schools	Impact HAZ-3: The proposed action would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Government Code section 65962.5	Impact HAZ-4: The proposed action could be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard for the public or the environment. (LTS)	More than the proposed action. (LTS)	Similar to the proposed action. (LTS)	More than the proposed action. (LTS)	More than the proposed action. (LTS)

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	Proposed Action	Eastside Alternative	Preservation Alternative	Dispersed Growth Alternative	Plan Bay Area 2050
Emergency Response	Impact HAZ-5: The proposed action would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Hazards	Impact C-HAZ-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on hazards. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Energy					
Construction and Operation Energy	Impact EN-1: The proposed action would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Conflict with Energy Plan	Impact EN-2: The proposed action would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)
Cumulative Energy	Impact C-EN-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on energy. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)	Similar to the proposed action. (LTS)

Source: ICF, 2022.

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Table S-3: Comparison of the Environmental Impacts of the Proposed Action to the Impacts of the No Project Alternative

	Proposed Action	No Project Alternative
Land Use and Planning		
Physically Divide Existing Communities	Impact LU-1: The proposed action would not physically divide an established community. (LTS)	Similar to the proposed action. (LTS)
Conflict with Land Use Plans	Impact LU-2: The proposed action would not cause a significant physical environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (LTS)	Similar to the proposed action. (LTS)
Cumulative Land Use	Impact C-LU-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative land use impact. (LTS)	Similar to the proposed action. (LTS)
Aesthetics		
Scenic Vista	Impact AE-1: The proposed action would not have a substantial adverse effect on a scenic vista. (LTS)	Similar to the proposed action. (LTS)
Damage Scenic Resources	Impact AE-2: The proposed action would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (LTS)	Similar to the proposed action. (LTS)
Conflict with Zoning and Scenic Quality Regulations	Impact AE-3: The proposed action would not conflict with applicable zoning and other regulations governing scenic quality. (LTS)	Similar to the proposed action. (LTS)
Light and Glare	Impact AE-4: The proposed action would not create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area. (LTS)	Similar to the proposed action. (LTS)
Cumulative Aesthetics	Impact C-AE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative aesthetic impact. (LTS)	Similar to the proposed action. (LTS)
Population and Housing		
Population Growth	Impact PH-1: The proposed action would not induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	No Project Alternative
Replacement Housing	Impact PH-2: The proposed action would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing. (LTS)	Similar to the proposed action. (LTS)
Cumulative Population and Housing	Impact C-PH-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact from unplanned population growth or displacement. (LTS)	Similar to the proposed action. (LTS)
Cultural Resources		
Built-Environment Historic Resources	Impact CR-1: The proposed action would cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5. (SUM)	Reduced compared to the proposed action. (SUM)
Archeological Resources	Impact CR-2: The proposed action has the potential to cause a substantial adverse change in the significance of an archeological resource pursuant to section 15064.5. (LTSM)	Reduced compared to the proposed action. (LTSM)
Human Remains	Impact CR-3: The proposed action has the potential to disturb human remains, including those interred outside of formal cemeteries. (LTSM)	Reduced compared to the proposed action. (LTSM)
Cumulative Built-Environment Historic Resources	Impact C-CR-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to historical resources, as defined in CEQA Guidelines section 150.64.5. (SUM)	Similar to the proposed action. (SUM)
Cumulative Archeological Resources and Human Remains	Impact C-CR-2: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to archeological resources and human remains. (LTSM)	Similar to the proposed action. (LTSM)
Tribal Cultural Resources		
Archeological Tribal Cultural Resources	Impact TCR-1: The proposed action would result in a substantial adverse change to an archeological tribal cultural resource. (LTSM)	Reduced compared to the proposed action. (LTSM)
Non-Archeological Tribal Cultural Resources	Impact TCR-2: The proposed action would result in a substantial adverse change in the significance of a non-archeological tribal cultural resource. (LTSM)	Reduced compared to the proposed action. (LTSM)
Cumulative Tribal Consultation Resources	Impact C-TCR-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact on tribal cultural resources. (LTSM)	Similar to the proposed action. (LTSM)

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	Proposed Action	No Project Alternative
Transportation and Circulation		
Construction-related potentially hazardous conditions, accessibility, or substantially delay public transit	Impact TR-1: The proposed action would require a substantially extended duration or intense activity due to construction and the secondary effects of that construction could create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations, or interfere with emergency access or accessibility for people walking or bicycling or substantially delay public transit. (SU)	Similar to the proposed action. (SU)
Potentially Hazardous Conditions	Impact TR-2: The proposed action would not create potentially hazardous conditions for people walking, bicycling, or driving or public transit operations. (LTS)	Similar to the proposed action. (LTS)
Accessibility	Impact TR-3: The proposed action would not interfere with accessibility of people walking or bicycling to and from the project site, and adjoining areas, or result in inadequate emergency access. (LTS)	Similar to the proposed action. (LTS)
Public Transit Delay	Impact TR-4: The proposed action would substantially delay public transit. (SUM)	Similar to the proposed action. (SU)
Vehicle Miles Traveled (VMT)/Induced Automobile Travel	Impact TR-5: The proposed action would not cause substantial additional VMT or substantially induce automobile travel. (LTS)	Similar to the proposed action. (LTS)
Loading	Impact TR-6: The proposed action could result in a loading deficit and the secondary effects could create potentially hazardous conditions for people walking, bicycling, or driving; or substantially delay public transit. (SUM)	Similar to the proposed action. (SUM)
Parking	Impact TR-7: The proposed action would not result in a parking deficit. (LTS)	Similar to the proposed action (LTS)
Cumulative Construction-Related Transportation	Impact C-TR-1: The proposed action, in combination with cumulative projects, would result in significant construction-related transportation impacts, and the proposed action would contribute considerably to those impacts. (SU)	Similar to the proposed action. (SU)
Cumulative Potentially Hazardous Conditions, Accessibility, VMT, and Parking	Impact C-TR-2: The proposed action, in combination with cumulative projects, would not create potentially hazardous conditions, would not interfere with accessibility; would not cause substantial additional VMT or substantially induce automobile travel; and would not result in significant parking impacts. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	No Project Alternative
Cumulative Public Transit Delay	Impact C-TR-3: The proposed action, in combination with cumulative projects, would substantially delay public transit, and the proposed action would contribute considerably to those impacts. (SUM)	Similar to the proposed action (SUM)
Cumulative Loading	Impact C-TR-4: The proposed action, in combination with cumulative projects, could result in significant cumulative loading impacts, and the proposed action could contribute considerably to those impacts. (SUM)	Similar to the proposed action (SUM)
Noise		
Construction Noise	Impact NO-1: Construction of future development consistent with the proposed action would generate a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (SUM)	Reduced compared to the proposed action. (SUM)
Operational Noise	Impact NO-2: Operation of the proposed action would generate noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies. (SUM)	Reduced compared to the proposed action. (SUM)
Construction Vibration	Impact NO-3: Construction of future development consistent with the proposed action would generate excessive groundborne vibration. (LTSM)	Reduced compared to the proposed action. (LTSM)
Cumulative Construction Noise	Impact C-NO-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative construction noise impact. (SUM)	Reduced compared to the proposed action. (SUM)
Cumulative Operational Noise	Impact C-NO-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative operational noise impact. (LTS)	Reduced compared to the proposed action. (SUM)
Air Quality		
Conflict with Clean Air Plan	Impact AQ-1: The proposed action would not conflict with or obstruct implementation of the applicable air quality plan. (LTS)	Similar to the proposed action (LTS)
Criteria Air Pollutants – Proposed Action	Impact AQ-2: The proposed action would result in a cumulatively considerable net increase in criteria pollutants for which the project region is in nonattainment status under an applicable federal or state ambient air quality standard. (SUM)	Reduced compared to the proposed action (LTS)

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	Proposed Action	No Project Alternative
Criteria Air Pollutants – Future Development (Construction)	Impact AQ-3: Construction of future development consistent with the proposed action would result in a cumulatively considerable net increase in non-attainment criteria pollutant emissions. (LTSM)	Similar to the proposed action. (LTSM)
Criteria Air Pollutants – Future Development (Operation)	Impact AQ-4: The proposed action would not result in a cumulatively considerable net increase in any non-attainment criteria pollutant during operations. (LTS)	Similar to the proposed action (LTS)
PM _{2.5} and TACs	Impact AQ-5: The proposed action would expose sensitive receptors to substantial levels of fine particulate matter (PM _{2.5}) and toxic air contaminants. (SUM)	Similar to the proposed action (SUM)
Odors	Impact AQ-6: The proposed action would not result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people. (LTS)	Similar to the proposed action (LTS)
Cumulative PM _{2.5} and TACs	Impact C-AQ-1: The proposed action, in combination with cumulative projects, would expose sensitive receptors to substantial levels of fine particulate matter (PM _{2.5}) and toxic air contaminants under cumulative conditions. (SUM)	Similar to the proposed action (SUM)
Cumulative Odors	Impact C-AQ-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative odor impact. (LTS)	Similar to the proposed action (LTS)
Greenhouse Gas Emissions		
Greenhouse Gas (GHG) Emissions	Impact GHG-1: The proposed action would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (LTS)	Similar to the proposed action. (LTS)
Conflict with GHG Plans	Impact GHG-2: The proposed action would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases. (LTS)	Similar to the proposed action. (LTS)
Wind		
Wind in Outdoor Public Areas	Impact WI-1: The proposed action would create wind hazards in publicly accessible areas of substantial pedestrian use. (SUM)	Similar to the proposed action (SUM)
Cumulative Wind in Outdoor Public Areas	Impact C-WI-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative wind impact. (LTS)	Similar to the proposed action (LTS)

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	Proposed Action	No Project Alternative
Shadow		
Publicly Accessible Open Space	Impact SH-1: The proposed action would create new shadow that would substantially and adversely affect the use and enjoyment of publicly accessible open spaces. (SUM)	Reduced compared to the proposed action (SU)
Cumulative Publicly Accessible Open Space	Impact C-SH-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative shadow impact. (LTS)	Similar to the proposed action (LTS)
Recreation		
Use of Facilities	Impact RE-1: The proposed action would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. (LTS)	Reduced compared to the proposed action. (LTS)
Construction of Recreational Facilities	Impact RE-2: The proposed action would not include recreational facilities but would require the construction or expansion of recreational facilities that would have an adverse physical effect on the environment. (LTSM)	Reduced compared to the proposed action. (LTSM)
Cumulative Recreation Impacts	Impact C-RE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on recreation. (LTS)	Similar to the proposed action. (LTS)
Utilities and Service Systems		
Water Supply	Impact UT-1: Sufficient water supplies would be available to serve projected growth in normal, dry, and multiple dry years without implementation of the Bay Delta Plan Amendment. If the Bay Delta Plan Amendment is implemented, the SFPUC would require rationing and could develop new or expanded water supply facilities to address shortfalls in single and multiple dry years. Environmental impacts related to new or expanded water supply facilities and increased rationing would result in significant and unavoidable environmental impacts. (SU)	Reduced compared to the proposed action. (SU)
Expansion of Wastewater Treatment or Stormwater Drainage Facilities	Impact UT-2: The proposed action would require or result in the relocation or construction of new or expanded wastewater treatment or stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects. (SUM)	Reduced compared to the proposed action. (LTS)

Notes: LTS = less than significant; LTSM = less than significant with mitigation; SUM = significant and unavoidable with mitigation;
SU = significant and unavoidable;

bold text = impact of the alternative is reduced or more than the impact of the proposed action

	Proposed Action	No Project Alternative
Expansion of Electric Power or Telecommunication Facilities	Impact UT-3: The proposed action would require or result in the relocation or construction of new or expanded electric power or telecommunication facilities, the construction or relocation of which could cause significant environmental effects. (LTSM)	Reduced compared to the proposed action. (LTS)
Wastewater Treatment Capacity	Impact UT-4: The proposed action would result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (SUM)	Reduced compared to the proposed action. (LTS)
Solid Waste – Capacity	Impact UT-5: The proposed action would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair attainment of solid waste reduction goals. (LTS)	Reduced compared to the proposed action. (LTS)
Solid Waste –Regulations	Impact UT-6: The proposed action would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. (LTS)	Similar to the proposed action. (LTS)
Cumulative Wastewater and Stormwater	Impact C-UT-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to the wastewater and stormwater collection and treatment system. (LTS)	Similar to the proposed action. (LTS)
Cumulative Electric and Telecommunications	Impact C-UT-2: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to electric and telecommunication facilities. (LTS)	Similar to the proposed action. (LTS))
Cumulative Solid Waste	Impact C-UT-3: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact related to solid waste facilities and regulations. (LTS)	Similar to the proposed action. (LTS)
Public Services		
Fire Services	Impact PS-1: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency medical services. (LTSM)	Reduced compared to the proposed action. (LTSM)

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SU = significant and unavoidable;

bold text = impact of the alternative is reduced or more than the impact of the proposed action

	Proposed Action	No Project Alternative
Police Services	Impact PS-2: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for police protection. (LTSM)	Reduced compared to the proposed action. (LTSM)
Schools	Impact PS-3: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios or other performance objectives for schools. (LTSM)	Reduced compared to the proposed action. (LTSM)
Libraries	Impact PS-4: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios or other performance objectives for libraries. (LTSM)	Reduced compared to the proposed action. (LTSM)
Parks	Impact PS-5: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for parks. (LTSM)	Reduced compared to the proposed action. (LTSM)
Cumulative Public Services	Impact C-PS-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on public services. (LTS)	Similar to the proposed action. (LTS)
Biological Resources		
Candidate, Sensitive, or Special-status Species	Impact BIO-1: The proposed action would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (LTS)	More than the proposed action. (LTS)

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SU = significant and unavoidable;

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	Proposed Action	No Project Alternative
Riparian Habitat or Other Sensitive Natural Community	Impact BIO-2: The proposed action would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (LTS)	Similar to the proposed action. (LTS)
Wetlands	Impact BIO-3: The proposed action would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (LTS)	Similar to the proposed action. (LTS)
Migration of native resident or migratory species	Impact BIO-4: The proposed action would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (LTS)	Similar to the proposed action. (LTS)
Conflict with Existing Policies	Impact BIO-5: The proposed action would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (LTS)	Similar to the proposed action. (LTS)
Cumulative Biological Resources	Impact C-BIO-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on biological resources. (LTS)	Similar to the proposed action. (LTS)
Geology and Soils		
Surface Fault Rupture, Seismic Ground Shaking, Ground Failure, Liquefaction, Landslides	Impact GE-1: The proposed action would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismically related ground failure, liquefaction, or landslides. (LTS)	Similar to the proposed action. (LTS)
Erosion	Impact GE-2: The proposed action would not result in substantial soil erosion or the loss of topsoil. (LTS)	Similar to the proposed action. (LTS)
Geologic Unit/Unstable Soil	Impact GE-3: The proposed action would not result in a substantial risk of loss, injury, or death involving unstable geologic units or soils or onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. (LTS)	Similar to the proposed action. (LTS)

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	Proposed Action	No Project Alternative
Expansive Soils	Impact GE-4: The proposed action would not result in a substantial risk of loss, injury, or death related to expansive soils. (LTS)	Similar to the proposed action. (LTS)
Cumulative Geology and Soils	Impact C-GE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on geology and soils. (LTS)	Similar to the proposed action. (LTS)
Paleontological Resources		
Paleontological Resources	Impact GE-5: The proposed action would directly or indirectly destroy a unique paleontological resource or site. (LTSM)	Similar to the proposed action. (LTSM)
Cumulative Paleontological Resources	Impact C-GE-2: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact on paleontological resources. (LTS)	Similar to the proposed action. (LTS)
Hydrology and Water Quality		
Water and Groundwater Quality	Impact HY-1: The proposed action would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. (LTS)	Similar to the proposed action. (LTS)
Groundwater	Impact HY-2: The proposed action would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin. (LTS)	Similar to the proposed action. (LTS)
Drainage	Impact HY-3: The proposed action would not substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would result in substantial erosion, siltation, or flooding on- or offsite, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite, or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (LTS)	Similar to the proposed action. (LTS)
Flooding	Impact HY-4: In flood hazard, tsunami, or seiche zones, the proposed action would not risk a release of pollutants due to project inundation. (LTS)	Similar to the proposed action. (LTS)

	Proposed Action	No Project Alternative
Water Quality Control Plan or Groundwater Management Plan	Impact HY-5: The proposed action would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (LTS)	Similar to the proposed action. (LTS)
Cumulative Hydrology	Impact C-HY-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on hydrology and water quality. (LTS)	Similar to the proposed action. (LTS)
Hazards and Hazardous Materials		
Transit and Disposal	Impact HAZ-1: The proposed action would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (LTS)	Similar to the proposed action. (LTS)
Upset and Accidental Conditions	Impact HAZ-2: The proposed action would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (LTS)	Similar to the proposed action. (LTS)
Schools	Impact HAZ-3: The proposed action would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. (LTS)	Similar to the proposed action. (LTS)
Government Code section 65962.5	Impact HAZ-4: The proposed action could be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard for the public or the environment. (LTS)	More than the proposed action. (LTS)
Emergency Response	Impact HAZ-5: The proposed action would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (LTS)	Similar to the proposed action. (LTS)
Cumulative Hazards	Impact C-HAZ-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on hazards. (LTS)	Similar to the proposed action. (LTS)
Energy		
Construction and Operation Energy	Impact EN-1: The proposed action would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. (LTS)	Similar to the proposed action. (LTS)

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bold text = impact of the alternative is reduced or more than the impact of the proposed action

	Proposed Action	No Project Alternative
Conflict with Energy Plan	Impact EN-2: The proposed action would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (LTS)	Similar to the proposed action. (LTS)
Cumulative Energy	Impact C-EN-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on energy. (LTS)	Similar to the proposed action. (LTS)

Source: ICF, 2022.

Notes: LTS = less than significant; LTSM = less than significant with mitigation; SUM = significant and unavoidable with mitigation; SU = significant and unavoidable

1. INTRODUCTION

This environmental impact report (EIR) evaluates reasonably foreseeable environmental effects associated with adoption and implementation of the San Francisco Housing Element 2022 Update (housing element update or proposed action). This chapter presents an overview of the proposed action, outlines the purpose of the EIR, summarizes the environmental review process, describes the intended uses of the EIR, and describes the organization of the EIR.

A. Proposed Action Overview

The San Francisco Planning Commission (planning commission, and project sponsor) is proposing to update the 2014 housing element (existing 2014 housing element) of the San Francisco General Plan (general plan). This environmental impact report (EIR) has been prepared to evaluate the impacts on the environment that could result from adoption and implementation of the San Francisco Housing Element 2022 Update (housing element update or proposed action). The housing element update is mandated by state law, Government Code section 65583.

The housing element update establishes goals, policies, and actions to address the existing and projected housing needs of San Francisco. The goals, policies, and actions are required to plan for the regional housing targets allocated to San Francisco by regional agencies for 2023 to 2031 and to meet future housing demand in San Francisco.

The housing element update would modify the policies of the general plan's housing element. It would not implement specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure).¹ As such, the proposed action would not result in any direct physical changes to the environment, but would result in reasonably foreseeable indirect changes. Specifically, the department assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and to modify density controls in low-density areas that are primarily located on the west and north sides of the city, designation of housing sustainability districts, and approval of development projects consistent with the goals, policies, and actions of the housing element update.

In accordance with California Environmental Quality Act (CEQA) Guidelines section 15064(d), the EIR identifies these reasonably foreseeable environmental impacts that could occur as a result of the proposed action. When the EIR uses the phrase "impacts of the proposed action," it refers to the reasonably foreseeable impacts that would result from those future implementation actions and development compared with the development

¹ Any changes to existing land use controls would require related legislative processes including review and public hearings before the planning commission and/or the board of supervisors. Approval of housing development or infrastructure would require development applications and approval. This EIR analyzes the secondary physical environmental impacts that could occur as a result of the housing element update.

anticipated under the existing 2014 housing element through 2050. Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the City and County of San Francisco (city) by 2050, compared to 2020 conditions. The department projects approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (2050 environmental baseline).² In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated under the existing 2014 housing element. Future development consistent with the housing element update would predominately consist of residential projects, some with ground floor neighborhood services (e.g., retail or small medical offices), in well-resourced areas and along transit corridors.

B. Purpose of This Environmental Impact Report

This EIR is intended as an informational document and does not determine whether the proposed action will be approved. The EIR aids the planning and decision-making process by disclosing the potential for significant and adverse impacts of the proposed action. In conformance with CEQA, this EIR provides objective information for addressing the environmental consequences of the proposed action and identifies the means for reducing or avoiding its significant impacts where feasible.

The CEQA Guidelines help define the role and expectations of this EIR as follows:

- **Information Document.** An EIR is an informational document that informs public agency decision makers and the public of the significant environmental effect(s) of a project, identifies feasible ways to minimize significant effects, and describes reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information contained in the administrative record (section 15121(a)).
- **Degree of Specificity.** An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment; the EIR need not be as detailed as an EIR on the specific construction projects that might follow (section 15146(b)). This EIR is a program-level EIR, pursuant to CEQA Guidelines section 15168, discussed in more detail below.
- **Standards for Adequacy of an EIR.** 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 (section 15151).

² As described in Chapter 4, Environmental Setting and Impacts, the 2050 projected growth under the existing 2014 housing element is considered the 2050 environmental baseline.

CEQA Guidelines section 15382 defines a significant effect on the environment as “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.” Therefore, in identifying the significant impacts of the proposed action, this EIR concentrates on its substantial physical effects and on mitigation measures to avoid or reduce those effects.

Programmatic Review of Potential Impacts

In general, the housing element update would shift an increased share of the San Francisco’s projected future housing growth to transit corridors and low-density residential districts within well-resourced areas (see **Figure 2-1**, p. 2-2, in Chapter 2, Project Description).³ The housing element update would modify the policies of the general plan’s housing element. It would not implement specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure). As such, the proposed action would not result in any *direct* physical changes to the environment. In accordance with CEQA Guidelines section 15064(d), the EIR identifies the reasonably foreseeable indirect environmental impacts that could occur as a result of future actions that would implement the proposed action and development projects that would be consistent with it. As previously stated, when this EIR uses the phrase “impacts of the proposed action,” it refers to the reasonably foreseeable indirect impacts that would result from those future implementation actions and development projects compared with the development anticipated to occur under the existing 2014 housing element by 2050.

This EIR analyzes the proposed action at a programmatic level, in accordance with CEQA Guidelines section 15168. A programmatic analysis is appropriate for a project that will involve a series of actions that are (1) related geographically, (2) logical parts in a chain of contemplated actions, (3) connected as part of a continuing program, and (4) carried out under the same authorizing statute or regulatory authority and have similar environmental impacts that can be mitigated in similar ways. To the extent that any future changes to land use controls could result in significant adverse effects on the physical environment that were not anticipated in the housing element update EIR, those changes would require further environmental review. CEQA Guidelines section 15168 notes that the use of a programmatic EIR “ensure[s] consideration of cumulative impacts that might be slighted in a case-by-case analysis; avoid[s] duplicative reconsideration of basic policy considerations; allow[s] the lead agency to consider broad policy alternatives and program wide mitigation measures at an early time, when the agency has greater flexibility to deal with basic problems or cumulative impacts; and allow[s] a reduction in paperwork.”

Analysis Assumptions

As noted above, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Future development consistent with the housing element update would

³ *Well-resourced areas* are high- and highest-resource areas, which are neighborhoods identified by the State of California that provide strong economic, health, and educational outcomes for its residents. More information is available at: <https://www.sfhousingelement.org/well-resourced-neighborhoods>.

predominately consist of residential projects, some with ground floor neighborhood services (e.g., retail or small medical offices) in well-resourced areas and along transit corridors. Specifically, as shown in **Table 2-4**, p. 2-29, and **Figure 2-11**, p. 2-32, in Chapter 2, Project Description, a greater share of new housing units under the proposed action would be concentrated in the Ingleside, Inner Sunset, Marina, Outer Sunset, Richmond, and Western Addition planning districts when compared to the 2050 environmental baseline. While the impact analysis in the EIR is based on these representative future conditions, the depictions are not intended to be precise maps of where future development would occur. Rather, the depictions are used to identify the types and magnitude of impacts anticipated from the increased density and redistribution of housing growth under the proposed action compared to the 2050 environmental baseline. As discussed in the Housing Element 2022 Update Modeling and Projections Memorandum included in Appendix C of this EIR, the department projected future housing production and distribution under the 2050 environmental baseline, the proposed action, and the alternatives.

The housing element update focuses on housing production and distribution and does not include policies or actions that would substantially change the number or location of jobs in the city relative to the 2050 under the existing 2014 housing element. This EIR assumes that the number and distribution of jobs in the city would be essentially the same in 2050 under the existing 2014 housing element and the proposed action.

Alternatives to the Project

Chapter 6, Alternatives, considers a reasonable range of alternatives that would reduce, avoid, or eliminate potential impacts of the proposed action while still feasibly meeting most of the objectives of the proposed action. The alternatives studied in this EIR include:

- The No Project Alternative, which assumes housing development would continue to occur in San Francisco under the goals, policies, and implementing measures of the existing 2014 housing element
- The Eastside Alternative, which would include policies that would continue the existing development pattern in the city, which focuses development on the east side of the city and maintains lower density in the western neighborhoods
- The Preservation Alternative, which assumes that some of the proposed action's policies would be revised to include an additional focus on preserving historic resources and ensuring compatibility with historic districts
- The Dispersed Growth Alternative, which would include policies that would direct growth to well-resourced neighborhoods, mostly within low-density neighborhoods, focusing only on small multi-family buildings
- Plan Bay Area 2050, which is the long-range integrated transportation and land use/housing strategy through 2050 for the San Francisco Bay Area

C. Environmental Review Process

The department determined that preparation of an EIR was needed to evaluate potentially significant effects that could result from the proposed action. CEQA requires that before a decision can be made to approve a project or action that would result in potential adverse physical effects, an EIR must be prepared that fully

describes the environmental effects of the project. An EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of a project, identify mitigation measures to lessen or eliminate significant adverse impacts, and examine feasible alternatives to the project. The information contained in this EIR will be reviewed and considered by the decision makers prior to a decision to approve, disapprove, or modify the proposed action.

CEQA requires that the lead agency neither approve nor implement a project unless its significant environmental effects have been reduced to less-than-significant levels, essentially “eliminating, avoiding, or substantially lessening” the expected impact(s), except when certain findings are made. If the lead agency approves a project that would result in the occurrence of significant adverse impacts that cannot be mitigated to less-than-significant levels, the agency must state the reasons for its action in writing, in a statement of overriding considerations. A statement of overriding considerations sets forth the reasons an agency has determined to approve a project based on economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, despite the project’s unavoidable environmental risks.

Notice of Preparation of an Environmental Impact Report and Scoping Meeting

On June 16, 2021, the department sent a notice of preparation (NOP) of an EIR for the proposed housing element update to governmental agencies, organizations, and persons who may have an interest in the proposed action. The NOP requested that agencies and interested parties comment on environmental issues that should be addressed in the EIR (see Appendix A of this EIR). A virtual scoping meeting was held on June 29, 2021, to explain the environmental review process for the proposed action and provide an opportunity to take public comments related to the environmental issues of the housing element update. The department posted the scoping meeting presentation in English, Chinese, Spanish, and Filipino on the department’s website.

Table 1-1 summarizes the issues raised by the public and governmental agencies in response to the NOP prepared for the proposed action. The general topics raised in the written and oral comments include, but are not limited to, the environmental topics listed in **Table 1-1**. The department considered the comments received from the public and governmental agencies in response to the NOP and prepared this EIR.

Table 1-1: Summary of Scoping Comments

Main Issues Raised	Section of EIR Where Discussed
<ul style="list-style-type: none"> Impacts on visual character 	See “Aesthetics” in Section 4.1, Effects Found Not to Be Significant
<ul style="list-style-type: none"> Cumulative social impact of potential housing and growth, specifically as it relates to the displacement of people and homelessness 	See “Population and Housing” in Section 4.1, Effects Found Not to Be Significant

Main Issues Raised	Section of EIR Where Discussed
<ul style="list-style-type: none"> • Inadequate firefighting services available for post-earthquake fires • Public school planning to meet needs of population associated with increased housing density • Mapping more specific to neighborhoods, the preliminary maps identifying High Opportunity and High Resource Areas inappropriately incorporate public open space including the Lincoln Park and Lincoln Park Golf Course, parts of the Presidio and beachfront lands 	<p>See “Public Services” in Section 4.1, Effects Found Not to Be Significant</p>
<ul style="list-style-type: none"> • Impacts on tree canopy cover 	<p>See “Biological Resources” in Section 4.1, Effects Found Not to Be Significant</p>
<ul style="list-style-type: none"> • Construction activities as it relates to excavation of soil and loss of soil 	<p>See “Geology and Soils” in Section 4.1, Effects Found Not to Be Significant</p>
<ul style="list-style-type: none"> • Energy demand associated with construction activities 	<p>See “Energy” in Section 4.1, Effects Found Not to Be Significant</p>
<ul style="list-style-type: none"> • Compliance with SB 18 and SB 52 tribal cultural consultation requirements 	<p>See Section 4.3, Tribal Cultural Resources</p>
<ul style="list-style-type: none"> • Traffic congestion • Public transit infrastructure needed to enable movement of increased population • Concern that high cost of housing results in sprawl and increased vehicle miles traveled 	<p>See Section 4.4, Transportation and Circulation</p>
<ul style="list-style-type: none"> • Noise impacts associated with the increased volume of housing to meet San Francisco’s housing goals 	<p>See Section 4.5, Noise and Vibration</p>
<ul style="list-style-type: none"> • Impacts associated with construction equipment and vehicle trips associated with construction activities • Support for affordable housing to address climate change and equity issues • Increase in office space availability and air quality impacts associated with carbon-intensive commutes • Impacts related to emissions and climate change associated with constructing housing units in outlying, more car-dependent areas 	<p>See Section 4.6, Air Quality See “Greenhouse Gas Emissions” in Section 4.1, Effects Found Not to Be Significant</p>
<ul style="list-style-type: none"> • Aging infrastructure would not be able to support increased population • Auxiliary Water Supply System ability to provide water for firefighting services • Increased demand on water and wastewater infrastructure 	<p>See Section 4.9, Utilities and Service Systems</p>
<ul style="list-style-type: none"> • Alternatives with increased upzoning in the Pacific Heights, Marina, Cow Hollow, and Presidio Heights neighborhoods 	<p>See Chapter 6, Alternatives</p>

To the extent the topics raised in the NOP comment letters are related to the potential physical changes to the environment as a result of the proposed action, they have been addressed in the EIR. Comments expressing support for, or opposition to, the proposed action (including components of the proposed action) will be considered independently of the environmental review process by decision makers as part of their decision to approve, modify, or disapprove the proposed action.

Environmental Impact Report Analysis

This EIR analyzes significant effects that could result from the proposed action. As explained in section 15002(g) of the CEQA Guidelines, a significant effect on the environment is defined as a substantial adverse change in the physical conditions that exist in the area affected by a project. If the housing element update is not adopted, housing development would continue to occur under the policies and measures of the existing 2014 housing element. In addition, impacts from the housing element update would not take hold immediately; impacts would manifest over years and decades as new housing is constructed consistent with the housing element or consistent with planning code amendments adopted in response to the housing element update. As such, the environmental impact analysis in the EIR uses projected future (2050) conditions under the existing 2014 housing element, not existing conditions, as the baseline against which the significance of environmental impacts of the housing element update are assessed. Comparing and assessing impacts of the housing element update with current/existing conditions would mislead the public and decision makers into believing that (1) there would be no or few changes to existing conditions from continued development under the existing 2014 housing element; and (2) that all impacts from future (2050) development are the result of the housing element update, rather than development that could occur under the existing 2014 housing element. Those conclusions would be incorrect and would substantially overestimate the impacts caused by the housing element update. Thus, because the housing element update is a long-term plan with no direct impacts, use of an existing, current conditions or 2020 baseline would be misleading to the public and decision makers. Instead, use of a future 2050 baseline will better inform decision makers as to the impacts of adopting the housing element update rather than continuing with the status quo.

In accordance with CEQA and Chapter 31 of the city administrative code, this EIR identifies the potential environmental effects of the proposed action for all applicable environmental resource topics listed in Appendix G of the CEQA Guidelines as well as other environmental effects specific to San Francisco's urban environment, including wind and shadow impacts. For some resource topics, thresholds of significance are used to determine whether the significance criteria are met. Where significant impacts are identified, the EIR recommends feasible mitigation measures to reduce, eliminate, or avoid the significant impacts and identifies which significant impacts are unavoidable. Cumulative impacts (i.e., two or more individual effects that, when considered together, compound or increase other related environmental impacts) are discussed for each environmental resource topic. This document also discusses the alternatives to the proposed action in Chapter 6.

In accordance with section 15143 of the CEQA Guidelines, this EIR provides an analysis of the significant effects on the environment that could result from implementation of the proposed action. Section 15131 of the CEQA Guidelines specifies that "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.” In addition, if it is determined that a potential impact is too speculative for evaluation, this condition is noted, and further discussion of the impact is not necessary.

Public Review of the Environmental Impact Report

The EIR is available for viewing or downloading at the planning department website, sfplanning.org/sfceqadocs, by selecting Environmental Impact Reports and Negative Declarations under “Select a Review Category” or by searching for Case File No. 2019-016230ENV or San Francisco Housing Element 2022 Update under “Search Title Name and Address.” The EIR is also available for review on the 2nd floor of the 49 South Van Ness permit center. Due to the ongoing COVID-19 global pandemic, no in-person document viewing at the planning department office is available at the date of publication. You may request that a copy be sent to you by emailing CPC.HousingElementUpdateEIR@sfgov.org or calling 628.652.7557. In addition, all documents referenced in this EIR, are available upon request using the same contact information above.

The EIR was published on April 20, 2022. There will be a public hearing before the planning commission during the approximately 60-day public review and comment period for this EIR to solicit public comment on the adequacy and accuracy of information presented in the EIR. CEQA establishes a minimum draft EIR comment period of 30 days, or 45 days if the draft EIR is submitted to the State Clearinghouse for review (CEQA section 21091). The CEQA Guidelines further address the review period length, stating that the comment period should be not less than 30 days nor more than 60 days except in unusual circumstances (CEQA Guidelines section 151105(a)). Given the significance of the housing element update, the department determined that a review period of 60 days, instead of the typical 30 or 45 days, is appropriate for this EIR.

The public comment period for the EIR is April 20 to June 20, 2022. The public hearing on this EIR has been scheduled before the planning commission for June 9, 2022. Please check <https://sfplanning.org/hearings-cpc> the week of the hearing for the hearing agenda, location and/or public access code, or contact the assigned planner. The hearing will be streamed online at SFGovTV, <https://sfgovtv.org/planning>, or on cable channels 26 or 78, subject to SFGovTV scheduling. Further information and instructions on accessing the planning commission hearing and making a public comment are detailed on the planning department’s website, <https://sfplanning.org/hearings-cpc>.

A hearing has also been scheduled on June 1, 2022, before the San Francisco Historic Preservation Commission (historic preservation commission) in order for the historic preservation commissioners to provide comments to the planning commission on the EIR. Please check <https://sfplanning.org/hearings-hpc> for the specified hearing date or contact the assigned planner for information on how to participate in and provide comments at the hearing. The public can watch this hearing online at SFGovTV, <https://sfgovtv.org/planning>, on cable channels that will be specified in the hearing agenda, and via the online platform link accessible on the department’s website, <https://sfplanning.org/hearings-hpc>.

Please note that public comments provided at the historic preservation commission hearing will not be treated as comments on the EIR and will not be responded to in the responses to comments on the draft EIR document (described below). These comments are made to the historic preservation commission as the commission develops its comments on the draft EIR for the planning commission. Comments on the EIR should be provided

as set forth below. In addition, during the public review and comment period, members of the public are invited to submit written comments on the adequacy of the document, that is, whether the EIR, identifies and analyzes the possible environmental impacts and identifies appropriate mitigation measures. Those who testify at the hearing on the EIR or submit written comments and who provide an address (mailing or e-mail) will automatically receive a notification when the responses to comments on the draft EIR document is available on the planning department website. Others may request such notification, or request a USB or paper copy, by contacting Elizabeth White, at CPC.HousingElementUpdateEIR@sfgov.org or calling 628.652.7557.

Written comments should be emailed to CPC.HousingElementUpdateEIR@sfgov.org (preferred) or sent to Elizabeth White, San Francisco Planning Department, 49 South Van Ness Avenue, Suite 1400, San Francisco, CA 94103 by 5 p.m. on June 20, 2022. If attachments are provided as part of an e-mail comment on the EIR, please provide them in a text-searchable pdf format, if possible.

Commenters are not required to provide personal identifying information. All written or verbal communications, including submitted personal contact information, may be made available to the public for inspection and copying upon request and may appear on the department's website or in other public documents.

Only commenters on the EIR will be permitted to file an appeal of the certification of the final EIR to the San Francisco Board of Supervisors (board of supervisors).

Final EIR and Project Approval

Following the close of the EIR public review and comment period, the department will prepare and publish a document entitled "Responses to Comments on the Draft EIR," which will contain a copy of all comments received on this EIR and the department's responses to substantive comments, and any necessary changes to the text. In addition, the responses to comments document will include copies of the letters received and a transcript of the planning commission public hearing on the EIR. The response to comments document will also contain any minor staff-initiated changes to the EIR. The draft EIR and the response to comments together constitute the final EIR. The final EIR will be considered by the planning commission in an advertised public meeting, and then certified if deemed adequate. The responses to comments document will indicate the date reserved for consideration of EIR certification at the planning commission.

The planning commission, the board of supervisors, and other decision makers will use the information in the final EIR in their deliberations on whether to approve, modify, or deny the proposed action or aspects of the proposed action. If the planning commission decides to certify the EIR and recommends the general plan amendments to the board of supervisors and the board of supervisors adopts the housing element update, their approval actions must include findings that identify significant impacts that would result from the proposed action; discuss mitigation measures or alternatives that have been adopted to reduce significant impacts to less-than-significant levels; and explain reasons for rejecting mitigation measures or alternatives if any are infeasible for legal, social, economic, technological, or other reasons.

A mitigation monitoring and reporting program must be adopted by the planning commission and the board of supervisors as part of the adoption of the CEQA findings and project approvals by those bodies. The mitigation

monitoring and reporting program identifies the measures included in the proposed action or imposed by the decision makers as conditions of approval, the entities responsible for carrying out the measures, and the timing of implementation.

If significant unavoidable impacts would remain after all feasible mitigation measures are implemented, the approving body, if it elects to approve the proposed action, must adopt a statement of overriding considerations explaining how the benefits of the proposed action would outweigh the significant environmental impacts.

D. Intended Uses of This EIR

CEQA Guidelines section 15168(c) states that subsequent activities in a program must be examined in light of the program EIR to determine whether an additional environmental document must be prepared. Thus, this EIR assumes that future development consistent with the housing element update could be subject to further environmental review at the time subsequent actions (e.g., rezonings) or specific projects are proposed. The analysis of future actions would be based on existing conditions at the site and vicinity, at such time an action is proposed and would take into account any updated information relevant to the environmental analysis of the future projects (e.g., changes to the environmental setting).

Streamlined Review for Future Implementation Actions and Projects

This EIR identifies all physical impacts anticipated as a result of housing and job growth in the city through 2050. As noted in “Approach to Analysis” in Chapter 4, Environmental Setting and Impacts, most of the growth and related physical impacts would occur under the 2050 environmental baseline, regardless of adoption and implementation of the proposed action. The impacts attributable to the proposed action are based on a comparison of the 2050 projected growth under the existing 2014 housing element and the proposed action; specifically, under the proposed action the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated under the existing 2014 housing element, and the department predicts a different geographic distribution of housing development compared to the existing 2014 housing element. The cumulative impact analysis in this EIR identifies the impacts that would result from all housing and job growth in the city between 2022 through 2050, including the approximately 102,000 housing units and 111,000 jobs that would be added without the proposed action in combination with the approximately 50,000 housing units that would be added with the proposed action. Thus, the cumulative impact analysis in this EIR evaluates the combined impacts that would result from the addition of approximately 150,000 housing units and 111,000 jobs in the city by 2050. Pursuant to CEQA Guidelines section 15168, this program EIR will facilitate streamlined CEQA review for future actions that would implement the housing element update, such as planning code amendments to increase height limits along transit corridors and to modify density controls in low-density areas that are primarily located on the west and north sides of the city, and designation of housing sustainability districts. This EIR will also provide for streamlined review of future development projects consistent with the housing element update in accordance with the applicable provisions of CEQA and the CEQA Guidelines and summarized below.

CEQA Guidelines section 15168 encourages the use of program EIRs to streamline the review of later activities, which would be subject to project-level environmental review in accordance with CEQA at the time they are proposed.⁴ Specifically, in accordance with CEQA Guidelines section 15168(c), a program EIR can be used for later activities; the later activities in the program are required to be examined in light of the program EIR to determine whether an additional environmental document must be prepared.

Likewise, CEQA section 21155.10, and provisions of the CEQA Guidelines, including sections 15183 and 15183.3, provide for streamlined review of certain projects that are consistent with the development density established by general plan policies for which an EIR was certified. In accordance with these requirements, this EIR will support streamlined environmental review for future activities that are consistent with and that would implement the policies of the updated housing element following its adoption. Such activities could include both legislation to enact changes in zoning and other land use regulations and approval actions for individual development projects.

Another example of CEQA streamlining is CEQA section 21083.3, which mandates that projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects that are peculiar to the project or its site.

A further example of CEQA streamlining is CEQA section 21094.5, which provides a streamlined environmental review process for eligible infill projects by limiting the topics subject to review at the project level where the effects of infill development have been previously addressed in a planning-level decision⁵ or by uniformly applicable development policies.⁶

One foreseeable future outcome of the housing element update could be the designation of one or more housing sustainability districts that would streamline review and approval of residential development projects. No specific housing sustainability districts are proposed at this time as part of the housing element update, but the EIR identifies where such districts may be considered in the future. Designation of any future housing sustainability districts would require adoption of an ordinance by the board of supervisors and would be subject to environmental review in accordance with CEQA. This EIR may be used to inform and streamline the environmental review for the adoption of future housing sustainability districts that would implement the goals, policies, and actions of the housing element update.

⁴ These streamlining provisions only apply to projects that are subject to CEQA. Certain housing projects may also be exempt from environmental review pursuant to other provisions of CEQA (e.g., projects that are statutorily exempt or ministerial projects).

⁵ *Planning-level decision* means the enactment of an amendment of a general plan or any general plan element, community plan, specific plan, or zoning code.

⁶ *Uniformly applicable development policies* are policies or standards adopted or enacted by a city or county, or by a lead agency, to reduce one or more adverse environmental effects.

E. Report Organization

This EIR is organized into the following sections:

- *Summary*: This chapter summarizes the EIR by providing a concise overview of the proposed action, including associated approvals, environmental impacts that would result from the proposed action, mitigation measures identified to reduce or eliminate these impacts, and alternatives to the proposed action.
- *Chapter 1—Introduction*: This chapter includes a discussion of the purpose of this EIR, environmental review process, a summary of the comments received on the scope of the EIR, and the organization of the EIR.
- *Chapter 2—Project Description*: This chapter discusses the background and objectives of the proposed action, provides background data on the proposed action, describes the characteristics of the proposed action, and identifies proposed action approvals.
- *Chapter 3—Plans and Policies*: This chapter provides a summary of the plans, policies, and regulations of the city that are applicable to the proposed action.
- *Chapter 4—Environmental Setting and Impacts*: Each section in this chapter describes the existing environmental setting, regulatory setting, environmental impacts, cumulative impacts, and mitigation measures pertaining to each environmental topic listed below. Each environmental topic is discussed in a standalone section within this chapter, as follows:

4.1	Effects Found Not to Be Significant ⁷	4.6	Air Quality
4.2	Cultural Resources	4.7	Wind
4.3	Tribal Cultural Resources	4.8	Shadow
4.4	Transportation and Circulation	4.9	Utilities and Service Systems
4.5	Noise and Vibration	4.10	Paleontological Resources
- *Chapter 5—Other CEQA Considerations*: This chapter provides additional, specifically required analyses of the proposed action’s effects, growth-inducing impacts, significant unavoidable impacts, areas of known controversy, and issues to be resolved.
- *Chapter 6—Alternatives*: This chapter presents and analyzes a range of alternatives to the proposed action. Four CEQA alternatives are described and evaluated: No Project Alternative; Eastside Alternative; Preservation Alternative; and Dispersed Growth Alternative. In addition, this chapter discusses Plan Bay Area

⁷ The proposed action was found to have a less-than-significant impact with respect to the following CEQA Guidelines Appendix G topics: land use and planning, aesthetics, population and housing, greenhouse gas emissions, recreation, public services, biological resources, geology and soils (except paleontology), hydrology and water quality, hazards and hazardous materials, and energy. Mineral resources, agriculture and forestry resources, and wildfire were found to be not applicable. Therefore, these environmental topics are discussed in this section rather than in standalone sections of this EIR.

2050. This chapter also identifies the environmentally superior alternative, discusses alternatives that were considered for analysis in the EIR but rejected, and gives the reasons for their rejection.

- *Chapter 7—Report Preparers:* This chapter lists the authors who contributed to the EIR, which was prepared under the direction of the department. These include city staff and EIR consultants.
- *Appendices:* The following appendices are included as part of this document:
 - Appendix A: Notice of Preparation and Comments Received
 - Appendix B: Housing Element Update Policies and Implementing Actions
 - Appendix C: Housing Element 2022 Update Modeling and Projections
 - Appendix D: Aesthetics Supporting Information
 - Appendix E: Biological Resources Supporting Information
 - Appendix F: Cultural Resources Supporting Information
 - Appendix G: Transportation Supporting Information
 - Appendix H: Noise Supporting Information
 - Appendix I: Air Quality Supporting Information
 - Appendix J: Wind Supporting Information
 - Appendix K: Shadow Supporting Information

For paper copies of the EIR, appendices are provided on a USB attached to the back cover of the EIR. The EIR appendices are also available on the department’s website at sfplanning.org/sfceqadocs. In addition, USB and paper copies of the EIR and the EIR appendices are available by request by emailing CPC.HousingElementUpdateEIR@sfgov.org or calling 628.652.7557. Referenced materials are also available for review upon request.

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2. PROJECT DESCRIPTION

A. Proposed Action Overview

The San Francisco Planning Commission (planning commission, and project sponsor) is proposing to update the 2014 housing element (existing 2014 housing element) of the San Francisco General Plan (general plan). This environmental impact report (EIR) evaluates the reasonably foreseeable environmental effects associated with adoption and implementation of the San Francisco Housing Element 2022 Update (housing element update or proposed action). The housing element update is mandated by state law, Government Code section 65583.

The housing element update establishes goals, policies, and actions to address the existing and projected housing needs of San Francisco. The goals, policies, and actions are required to plan for the regional housing targets allocated to San Francisco by regional agencies for 2023 to 2031 and meet future housing demand in San Francisco. The housing element update includes policies designed to improve housing affordability and advance racial and social equity in accordance with the directives from the planning commission and historic preservation commission in summer 2020.¹ The housing element update includes overarching goals for the future of housing in San Francisco that respond both to state law requirements as well as local community values as understood from community outreach conducted for the housing element update. The underlying policies and actions would guide development patterns and the allocation of resources to San Francisco neighborhoods. In general, the housing element update would shift an increased share of the San Francisco's projected future housing growth to transit corridors and low-density residential districts within well-resourced areas (see **Figure 2-1**).²

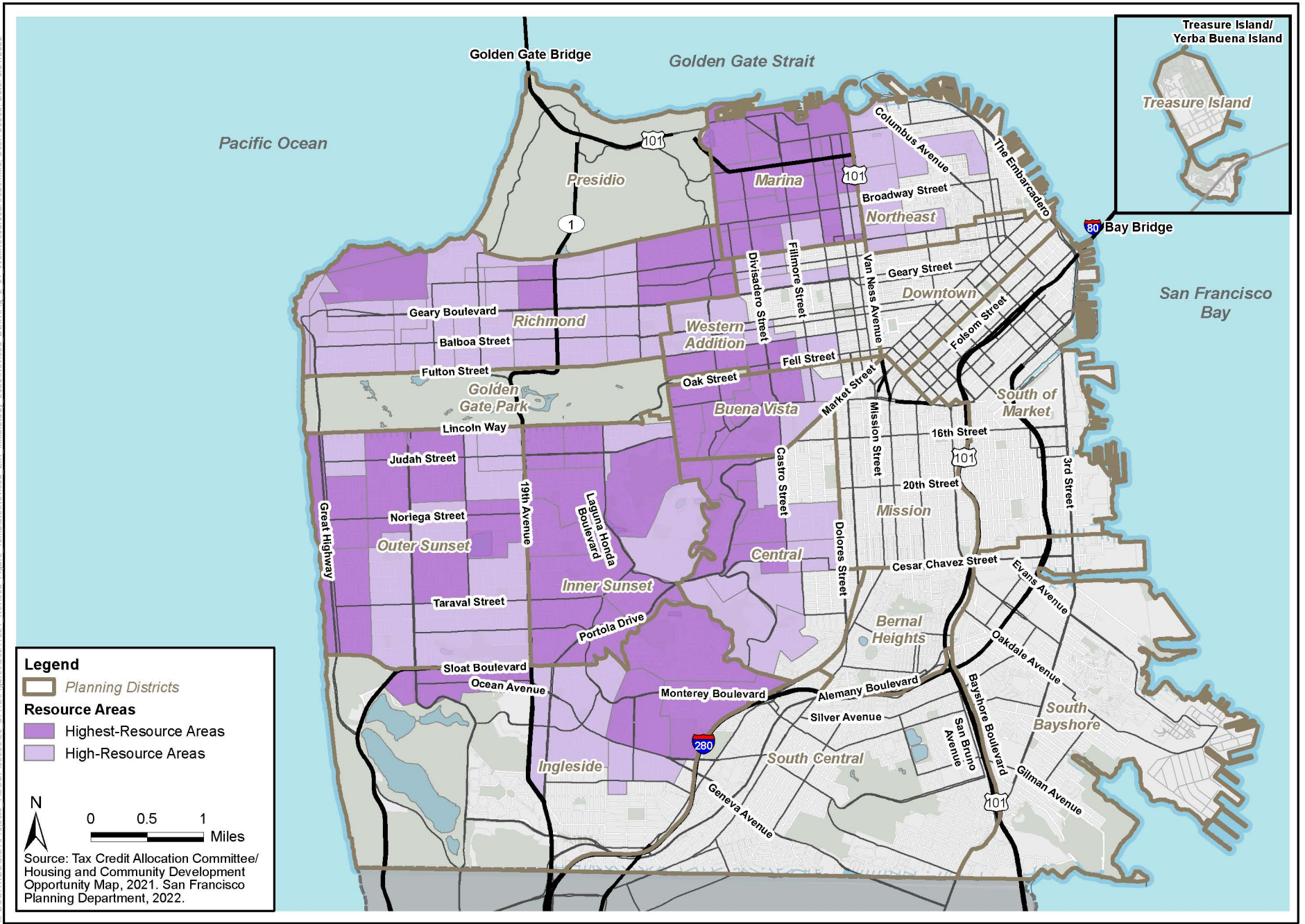
The housing element update would modify the policies of the general plan's housing element. It would not implement specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure).³ As such, the proposed action would not result in any direct physical changes to the environment, but would result in reasonably foreseeable changes. Specifically, the San Francisco Planning Department (department) assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and to modify density controls in low-density areas that are primarily located on the west and north sides of the city, designation of housing sustainability districts, and approval of development projects consistent with the goals, policies, and actions of the housing element update.

¹ San Francisco Planning Commission Resolution No. 20738, https://sfplanning.org/sites/default/files/documents/admin/R-20738_Centering_Planning_on_Racial_and_Social_Equity.pdf, June 11, 2020 and Historic Preservation Commission Resolution No. 1127, https://sfplanning.org/sites/default/files/documents/admin/R-1127_HPC_Equity_Resolution.pdf, July 15, 2020.

² *Well-resourced areas* are high- and highest-resource areas, which are neighborhoods identified by the State of California that provide strong economic, health, and educational outcomes for its residents. More information is available at: <https://www.sfhousingelement.org/well-resourced-neighborhoods>.

³ Any changes to existing land use controls would require related legislative processes including review and public hearings before the planning commission and/or the board of supervisors. Approval of housing development or infrastructure would require development applications and approval. This EIR analyzes the secondary physical environmental impacts that could occur as a result of the housing element update.

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In accordance with California Environmental Quality Act (CEQA) Guidelines section 15064(d), the EIR identifies these reasonably foreseeable environmental impacts that could occur as a result of the proposed action.

When the EIR uses the phrase “impacts of the proposed action,” it refers to the reasonably foreseeable impacts that would result from those future implementation actions and development compared with the development anticipated under the existing 2014 housing element through 2050. Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the City and County of San Francisco (city) by 2050, compared to 2020 conditions. The department projects approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (2050 environmental baseline).⁴ In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated under the existing 2014 housing element. Future development consistent with the housing element update would predominately consist of residential projects, some with ground floor neighborhood services (e.g., retail or small medical offices), in well-resourced areas and along transit corridors.

The proposed action would occur entirely within the city. San Francisco is a consolidated city and county and approximately 49 square miles in size. As shown in **Figure 2-2**, the city is on the tip of the San Francisco Peninsula, with the Golden Gate Strait to the north, San Francisco Bay to the east, San Mateo County to the south, and the Pacific Ocean to the west.

The department has prepared this EIR in compliance with CEQA and chapter 31 of the San Francisco Administrative Code. This EIR analyzes the environmental effects of the proposed action.

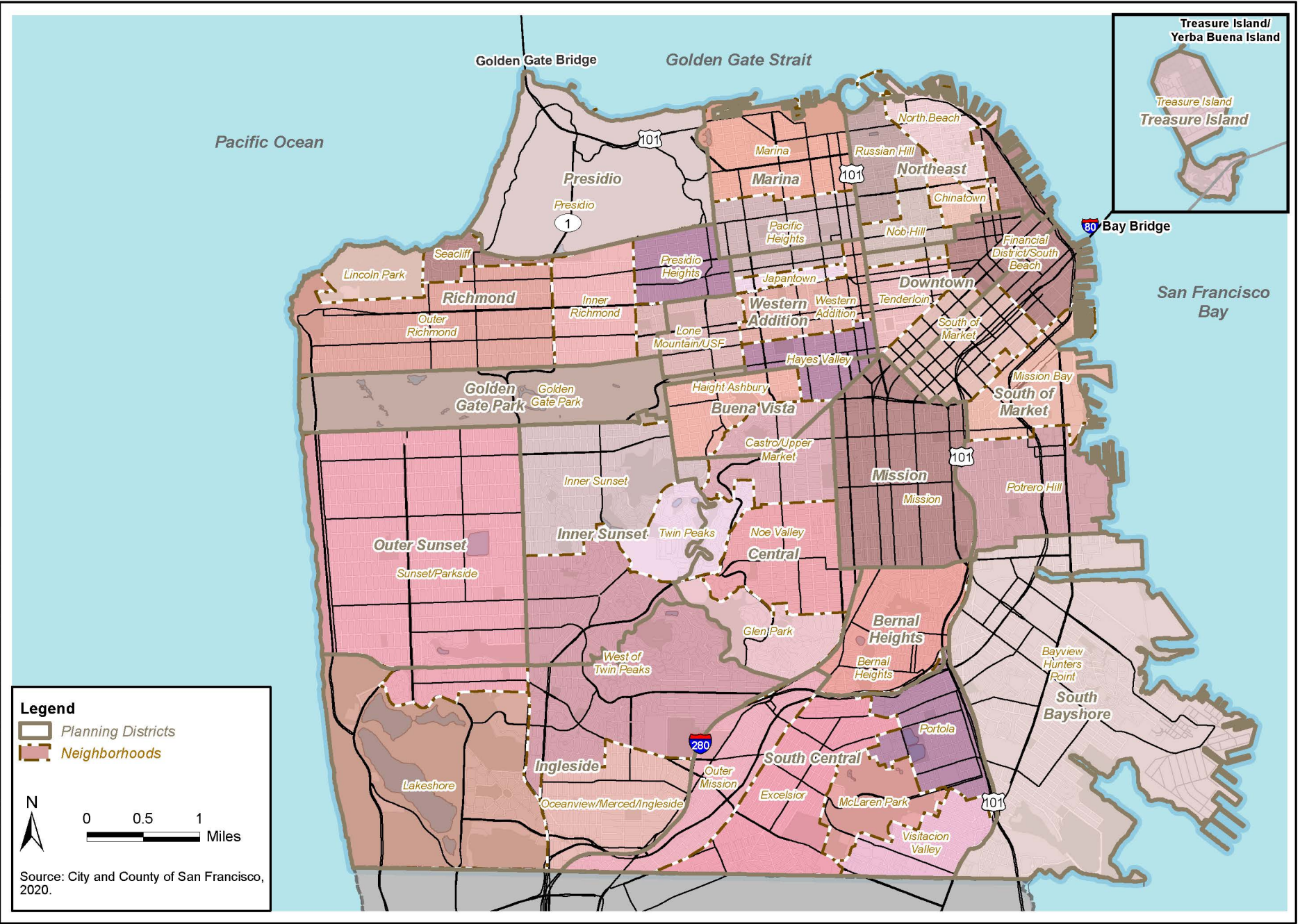
B. Housing Element Background

The housing element is San Francisco’s long-range plan for meeting anticipated future housing needs throughout the city. As discussed below, the housing element must be updated on a regular basis in accordance with state planning and housing law. This housing element update addresses anticipated growth through 2050 and is centered on racial and social equity. It includes policies and programs that express the collective vision and values of San Francisco communities for the future of housing in San Francisco. It defines priorities for housing solutions and will guide policy and resource-allocation decisions for creating housing and providing housing services.

The housing element is prepared in response to California’s housing element law, California Government Code section 65580 et seq., which requires local jurisdictions to adequately plan for and address the housing needs of all segments of their population such that all communities contribute to attainment of the state housing goals.

⁴ As described in Chapter 4, Environmental Setting and Impacts, the 2050 projected growth under the existing 2014 housing element is considered the 2050 environmental baseline.

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The housing element allows the city to plan its housing goals and needs as its community changes, and to consider the economic, environmental, and fiscal factors that affect the city's ability to meet those goals. State certification of the housing element provides the city with a number of benefits and priority access to state housing funds. Without a certified housing element, the city risks ineligibility for state housing and infrastructure funds as well as the loss of state and federal housing assistance funding.

The housing element update includes:

- An analysis of housing needs in San Francisco
- Policies that address those needs based on the collective vision and values of our communities
- Actions that would implement those policies and recommend changes to existing programs or the creation of new programs
- A guiding framework for future legislation

Adoption of the housing element update will not:

- Modify existing controls on land use, height, or density
- Implement specific controls for individual neighborhoods
- Amend the zoning map or planning code
- Directly fund housing development

Housing Element Legal Requirements

The housing element is one of the seven required elements in a general plan. Its required contents are set forth in California Government Code section 65583. Housing element law requires local governments to adequately plan to meet their existing and projected housing needs, including their share of the "regional housing need," described below. The law recognizes that in order for the private sector to adequately address housing needs and demand, local governments must adopt land use plans and regulatory schemes that provide opportunities for, and do not unduly constrain, housing development. Specifically, section 65583 states that the housing element shall 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 must also contain a schedule of actions that the local government is undertaking to implement the goals and objectives (i.e., the city's required contribution to the provision of housing for the region). As discussed above, state law requires that the housing element be updated periodically, usually every eight years. It is subject to detailed statutory requirements and mandatory review by the California Department of Housing and Community Development (HCD).

Under state law, the HCD is required to allocate a region's share of the projected statewide housing need to its council of governments, based on California Department of Finance population projections and regional population forecasts. The Association of Bay Area Governments (ABAG) is the regional authority charged with

preparing the regional housing needs allocation (RHNA), which quantifies the housing need for local jurisdictions in the San Francisco Bay Area. Although land use planning is generally a local issue, the HCD recognizes that the availability of housing is a matter of statewide importance. Therefore, state housing element law requires local housing elements to balance the need for growth, including the need for additional housing, against competing local interests. California Government Code section 65583 requires that the housing element include the following components:

- **Housing Needs Assessment.** Housing element law requires local governments to adequately plan to meet their existing and projected housing needs, including their share of the RHNA. A complete analysis includes a quantification and a descriptive analysis of the specific needs and resources available to address these needs.
- **Site Inventory and Analysis.** California Government Code section 65583(a)(3) requires local governments to prepare an inventory of land suitable for residential development, including vacant sites and sites having the potential for redevelopment, and an analysis of the relationship of zoning and public facilities and services to these sites. The inventory of land suitable for residential development is used to identify sites that can be developed for housing within the planning period.
- **Constraints.** The housing element must identify and analyze potential and actual governmental constraints to the maintenance, improvement, or development of housing for all income levels, including housing for people with disabilities. The analysis should identify the specific standards and processes of these constraints and evaluate their impact on the supply and affordability of housing. The analysis should determine whether local regulatory standards pose an actual constraint and must also demonstrate local efforts to remove constraints that hinder a jurisdiction from meeting its housing needs.
- **Program Requirements.** Each jurisdiction must identify specific programs in its housing element that will allow it to implement the stated policies and achieve the stated goals and objectives. Programs must include specific actions the locality will take to implement its policies and achieve its goals and objectives. Programs must also include a specific timeframe for implementation, identify the agencies or officials responsible for implementation, describe the jurisdiction’s specific role in implementation, and (whenever possible) identify specific, measurable outcomes.
- **Affirmatively Furthering Fair Housing.** California Government Code section 8899.50 requires public agencies to administer programs and activities relating to housing and community development in a manner that “affirmatively furthers fair housing,” by “taking meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics” (such as race, nationality, age, or gender).

The housing element update includes a detailed housing needs assessment; San Francisco’s population, employment, and income trends; housing trends; the RHNA; housing affordability needs; housing needs of special population groups; housing preservation needs; and replacement of lost units. It also includes an assessment of fair housing in accordance with affirmatively furthering fair housing state laws. The housing element update also includes an analysis of government and non-government constraints to development, an

explanation of how the city will meet its housing needs through a detailed site inventory analysis, as well as an evaluation of the existing 2014 housing element.

Regional Housing Needs Allocation and Plan Bay Area

As discussed above, ABAG, in coordination with the HCD, determined the Bay Area's regional housing need based on regional trends, projected population and job growth, income levels, and existing needs. Once the region's fair share of regional housing need is agreed upon, the housing need is allocated amongst all of the jurisdictions (cities/counties) within that region, and the city's fair share of regional housing need is calculated for each established planning horizon. The regional housing needs determination is based on California Department of Finance projections and the application of specific adjustments⁵ to determine the total amount of housing needs for the region.⁶ Recent legislation governing the methodology for how the HCD calculates the regional housing needs determination resulted in a substantially higher number of housing units for which the Bay Area must plan compared to previous RHNA cycles. The RHNA determination includes production targets for housing to serve various household income categories.⁷ The housing element update includes goals, policies, and actions designed to meet the RHNA goals for the city. While San Francisco has historically had the zoning capacity to meet its RHNA for all categories of housing, San Francisco has produced only enough above-moderate income housing to meet its RHNA goals; moderate-income and low-income housing production in the city has historically fallen short of the RHNA goals.

Plan Bay Area 2050 is the long-range integrated transportation and land-use/housing strategy through 2050 for the San Francisco Bay Area. On October 21, 2021, Plan Bay Area 2050 was jointly approved by the ABAG Executive Board and by the Metropolitan Transportation Commission. Per the Sustainable Communities and Climate Protection Act of 2008, effective January 1, 2009, the RHNA is required to be consistent with the development pattern in Plan Bay Area 2050.

The city's fair share of the regional housing need for 2023 to 2031 was calculated as approximately 82,070 units, or approximately 10,260 units per year. **Table 2-1** presents the RHNA for the housing element. According to U.S. census data,⁸ the median household income in San Francisco in 2019 was \$123,859, while median per capita income was \$75,084. The median family income in 2019 was \$140,707.

⁵ The adjustments are a result of recent legislation that sought to incorporate an estimate of existing housing need by requiring the HCD to apply factors related to a target vacancy rate, the rate of overcrowding, and the share of cost-burdened households.

⁶ Association of Bay Area Governments, *Final Regional Housing Need Plan for the San Francisco Bay Area 2023–2031*, https://abag.ca.gov/sites/default/files/documents/2021-12/Final_RHNA_Allocation_Report_2023-2031-approved_0.pdf, accessed February 22, 2022.

⁷ More information about ABAG's calculation of the RHNA is available at: www.abag.ca.gov.

⁸ U.S. Census Bureau, *American Community Survey*, 2019, <https://www.census.gov/programs-surveys/acs/>, accessed October 21, 2021.

Table 2-1: Housing Element Update Regional Housing Needs Allocation

Household Income Category	Percentage of Area Median Income ¹	Number of Units	Percentage
Very Low	< 50%	20,867	25.4
Low	50%–80%	12,014	14.6
Moderate	80%–120%	13,717	16.8
Above Moderate	> 120%	35,471	43.2
Total	—	82,069	100.0

Source: Association of Bay Area Governments, *Final Regional Housing Need Plan for the San Francisco Bay Area 2023–2031*, https://abag.ca.gov/sites/default/files/documents/2021-12/Final_RHNA_Allocation_Report_2023-2031-approved_0.pdf, accessed March 21, 2022.

Note:

¹ The area median income is the midpoint of a region's income distribution – half of families in a region earn more than the median and half earn less than the median. According to U.S. census data, the median household income in San Francisco in 2019 was \$123,859, while median per capita income was \$75,084. The median family income in 2019 was \$140,707.

Housing Element Update Process

The department launched the public process for updating the housing element in June 2020, and a first phase of outreach was completed in December 2020. This outreach included 1,631 survey respondents, 118 online platform participants, and approximately 30 community engagement events (listening sessions, presentations, and expert consultations). Based on this community outreach and engagement, the department published a first draft of goals, policies, and actions in April 2021. During the second phase of outreach (April–September 2021), the department collaborated with 21 community organizations to lead over 22 focus groups, participated in 25 community conversations hosted by various community or neighborhood organizations, and hosted six conversations with housing experts. The findings of this outreach process were presented on October 14, 2021 at the planning commission hearing, and the second draft was released on January 14, 2022. A third draft of goals, policies, and actions was released on March 24, 2022 and presented to the planning commission in early spring 2022 and will be submitted to the HCD for its review and feedback. Any final revisions will be incorporated into a final draft for adoption, which will be presented at a general plan amendment initiation hearing, followed by a hearing for adoption. If recommended by the planning commission, the board of supervisors would adopt or disapprove at a public hearing. If adopted, the housing element update would be submitted to the HCD for final certification.

Past housing element policies have fallen short of resulting in the actual construction of a sufficient number of below market rate housing units to fully meet the RHNA. Thus, the housing element update's overall goal is to increase construction of housing units above past production levels. The draft goals, policies, and actions in the housing element update are informed by other recently completed housing-related initiatives, including the Housing Affordability Strategies Report.⁹ The report analyzes several land use concepts and how they could improve housing affordability over the next 30 years, particularly for low- and moderate-income households. The

⁹ City and County of San Francisco, Planning Department, *San Francisco Housing Affordability Strategies*, March 2020, https://default.sfplanning.org/publications_reports/Housing_Affordability_Strategies_Report.pdf, accessed August 31, 2020.

Housing Affordability Strategies Report analyzes development feasibility, along with amendments to city policies, and necessary public investments required to add approximately 5,000 new housing units per year – approximately double current production trends – which would result in construction of approximately 150,000 housing units by 2050, and with at least one-third of the housing units as permanently affordable to households with low and moderate incomes. The land use concepts in the Housing Affordability Strategies Report inform the development pattern analyzed by this EIR as the probable result of the housing element update. In addition, the Housing Affordability Strategies Report, as well as the Community Stabilization Initiative,¹⁰ analyzes programs to preserve affordable housing and protect and stabilize existing residents. The purpose of the Housing Affordability Strategies Report is to help residents, city staff, and policy makers understand how different policies and funding strategies work together to address affordability and foster diversity.

The department acknowledges that the COVID-19 pandemic has changed the city’s circumstances related to land use and housing in the short-term.¹¹ Although the long-term land use and housing impact of the COVID-19 pandemic cannot be predicted with certainty, it is anticipated that the short-term effects would not substantially alter the broader development patterns anticipated in this EIR.

Relationship of the Housing Element to the San Francisco General Plan

State law requires that a general plan and its constituent elements “... comprise an integrated, internally consistent and compatible statement of policies for the adopting agency.”¹² The housing element must therefore be consistent with goals and policies set forth in all other general plan elements, including area plans.¹³ However, the general plan contains many policies that may, in some cases, address different goals, policies, and objectives and thus some policies may compete with each other. The planning commission and board of supervisors, in deciding whether to approve the housing element update, must decide whether, on balance, the proposed action is consistent with the general plan. The compatibility of the proposed action with the general plan and the city’s area plans is addressed in Chapter 3, Plans and Policies.

¹⁰ The Community Stabilization initiative is a multi-agency effort that seeks to mitigate the impacts of ongoing displacement and help vulnerable populations thrive and contribute to the city’s economy and culture.

¹¹ The COVID-19 pandemic began in March 2020 and is still ongoing as of the date of publication of this draft EIR in April 2022.

¹² California Government Code section 65584.

¹³ Area plans are comprehensive policy visions that guide the development and evolution of specific neighborhoods. These efforts, which are generally adopted as part of a city’s general plan, make changes to zoning and design policies, account for needed infrastructure improvements, and establish financial and implementation frameworks.

Type of EIR and Future Use

The primary objective of the housing element update is to promote the development of more housing through 2050 than is anticipated under existing 2014 housing element policies while also advancing racial and social equity. To meet the equity objectives, the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas that are primarily located on the west and north sides of the city. However, the adoption of the housing element update would not in and of itself legislate any changes in zoning or other land use regulations or approve any development projects. As such, the housing element update would not result in any *direct* physical changes to the environment. In accordance with CEQA Guidelines section 15064(d), the EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of future actions that would implement the proposed action and development projects that would be consistent with it. As previously stated, when this EIR uses the phrase “impacts of the proposed action,” it refers to the reasonably foreseeable impacts that would result from those future implementation actions and development projects compared with the development anticipated under the existing 2014 housing element by 2050.

This EIR analyzes the proposed action at a programmatic level, in accordance with CEQA Guidelines section 15168. A programmatic analysis is appropriate for a project that will involve a series of actions that are (1) related geographically, (2) logical parts in a chain of contemplated actions, (3) connected as part of a continuing program, and (4) carried out under the same authorizing statute or regulatory authority and have similar environmental impacts that can be mitigated in similar ways. CEQA Guidelines section 15168 notes that the use of a programmatic analysis “ensure[s] consideration of cumulative impacts that might be slighted in a case-by-case analysis; avoid[s] duplicative reconsideration of basic policy considerations; allow[s] the lead agency to consider broad policy alternatives and program wide mitigation measures at an early time, when the agency has greater flexibility to deal with basic problems or cumulative impacts; and allow[s] a reduction in paperwork.”

CEQA Guidelines section 15168 encourages the use of program EIRs to streamline the review of later activities, which would be subject to project-level environmental review in accordance with CEQA at the time they are proposed. Likewise, CEQA section 21155.10, and other provisions of the CEQA Guidelines, including sections 15183 and 15183.3 provide for streamlined review of certain projects that are consistent with the development density established by general plan policies for which an EIR was certified. Accordingly, this EIR will streamline the CEQA environmental review process for future activities that are consistent with and that would implement the policies of the updated housing element following its adoption. Such activities could include both legislation to enact changes in zoning and other land use regulations (e.g., the designation of housing sustainability districts) and approval actions for individual development projects. The department will therefore focus the CEQA review of future actions consistent with the housing element update on significant adverse impacts on the physical environment, if any, that were not anticipated in the housing element update EIR.

C. Project Objectives

Consistent with state law, the housing element update promotes the construction of housing units to meet San Francisco's RHNA. The primary objective of the housing element update is to provide a roadmap for the future of housing in San Francisco through goals, policies, and actions. The housing element update is San Francisco's first housing plan centered in racial and social equity. Therefore, the roadmap will direct how and where the city would grow and direct its investments to advance racial and social equity.

The housing element update includes the following overarching goals:

- Goal 1: Recognize the right to housing as a foundation for health, and social and economic well-being
- Goal 2: Repair the harms of racial and ethnic discrimination against American Indian, Black, and other people of color
- Goal 3: Foster racially and socially inclusive neighborhoods through equitable distribution of investment and growth
- Goal 4: Provide sufficient housing for existing residents and future generations for a city with diverse cultures, family structures, and abilities
- Goal 5: Promote neighborhoods that are well-connected, healthy, and rich with community culture

The primary objective of the housing element update is to promote the development of more housing through 2050 than is anticipated under existing 2014 housing element policies, while also advancing racial and social equity. To meet the equity objectives, the proposed policies seek to change the geographic distribution of where housing growth would occur in the city. As illustrated in **Figure 2-1**, p. 2-2, most of the well-resourced areas, as defined by state's opportunity area maps, are in the northern and western portions of the city. Most of the moderate and low-resource areas are in the eastern and southern portions of the city. The proposed action recommends equitable distribution of growth throughout the city, which would mean increased development in well-resourced areas. In well-resourced areas, the proposed action recommends promoting small and midrise multi-family development through height increases along certain transit corridors and through removing density limits or increasing allowable density limits in low-density areas.

D. Project Location

San Francisco is a consolidated city and county and approximately 49 square miles in size. The city is on the tip of the San Francisco Peninsula, with the Golden Gate Strait to the north, San Francisco Bay to the east, San Mateo County to the south, and the Pacific Ocean to the west. The city is one of nine counties adjacent to San Francisco Bay and San Pablo Bay collectively known as the San Francisco Bay Area. Daly City and the city of Brisbane abut San Francisco to the south. Interstate 280 (I-280) and State Route 1 (SR-1) provide access to the city from the south, U.S. 101 provides access to the city from the north and south, and Interstate 80 (I-80) provides access to the city from the east.

Topography in the city is varied; portions of the city are rolling or hilly, with elevations within city limits rising from sea level to 938 feet at Mount Davidson in the south-central part of the city. Most of the city's natural hydrology has been altered by urban development.

As illustrated in **Figure 2-2**, p. 2-4, the department divides the city into planning districts¹⁴ and neighborhoods.¹⁵ Although the city is densely developed, developable vacant and underutilized infill parcels¹⁶ exist throughout the city.

E. Setting and Policies

The fundamental purpose of CEQA is to identify how a proposed project or action would affect the physical environment. To conduct an analysis of a project's environmental effects, it is necessary to establish an environmental baseline against which the project's effects may be compared. For most projects, the baseline for CEQA review is the existing environment in a project area, or the "existing conditions" at the time the environmental review process starts. However, CEQA also provides that a lead agency may use projected future conditions as the environmental baseline for projects where the use of existing conditions would be either misleading or without informative value to decision makers and the public.

As discussed under "Environmental Baseline" in Chapter 4, Environmental Setting and Impacts, analysis in CEQA documents typically identify impacts by comparing conditions with the proposed project to existing conditions. However, this EIR assumes that if the housing element update is not adopted, housing development in San Francisco would continue to occur under the policies and implementing measures of the existing 2014 housing element. Because the proposed action would affect future development potential, this EIR uses a future baseline, different from existing conditions. An analysis of impacts based on existing conditions would be misleading to decision makers and the public because it would assume that all housing development was a result of the policies in the housing element update, and that no development would have occurred under the existing 2014 housing element policies, neither of which is the case. As a result, the analysis would substantially overestimate the impacts caused by the housing element update policies. Therefore, as discussed under "2050 Projected Growth Under the Existing 2014 Housing Element," below, the analysis of environmental impacts in this EIR is based on a comparison of growth under the existing 2014 housing element to growth under the housing element update. The impact analysis in the EIR uses projected future conditions, or 2050 environmental baseline, as the baseline against which environmental impacts are assessed, not existing conditions.

¹⁴ The city is divided into 18 planning districts, which are used in various aspects of the planning process.

¹⁵ The city is divided into 41 neighborhoods, which are used to provide consistency in the analysis and reporting of socio-economic, demographic, and environmental data as well as data on city-funded programs and services.

¹⁶ The department defines *underutilized infill parcels* as those where the ratio of maximum possible building square footage allowed by zoning to the existing total building square footage is 30 percent or less.

2020 Conditions

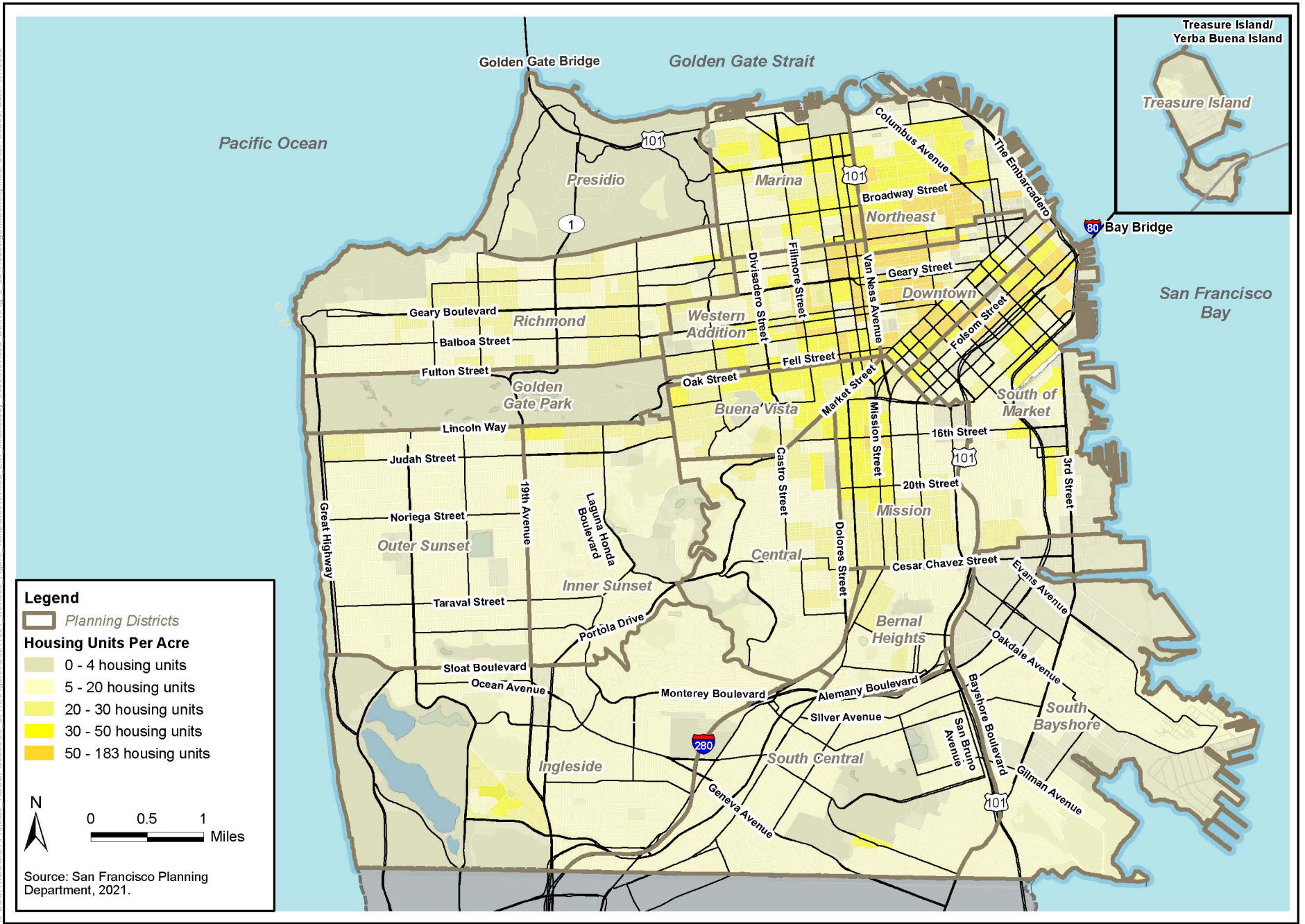
Although the EIR assesses the impacts of the proposed action against a future (2050) baseline condition, the analysis is informed by historic growth patterns and 2020 conditions. As of 2020, there were approximately 407,000 housing units and 771,000 jobs in the city. **Figure 2-3** shows the density of housing units in the city under 2020 conditions. Generally, the highest housing densities in the city exist in the downtown area at an average density of 218 housing units per acre, while lower densities (as low as 14 housing units per acre) exist in the western and southern areas of the city.¹⁷

Figure 2-4, p. 2-15, shows a generalized citywide zoning map under 2020 conditions. As shown, most areas in the city allow residential uses; the eastern portion of the city also includes commercial, mixed-use, and industrial uses. **Figure 2-5**, p. 2-16, shows the generalized citywide height districts permitted under 2020 conditions. The tallest height districts occur predominantly in the Downtown and South of Market planning districts.

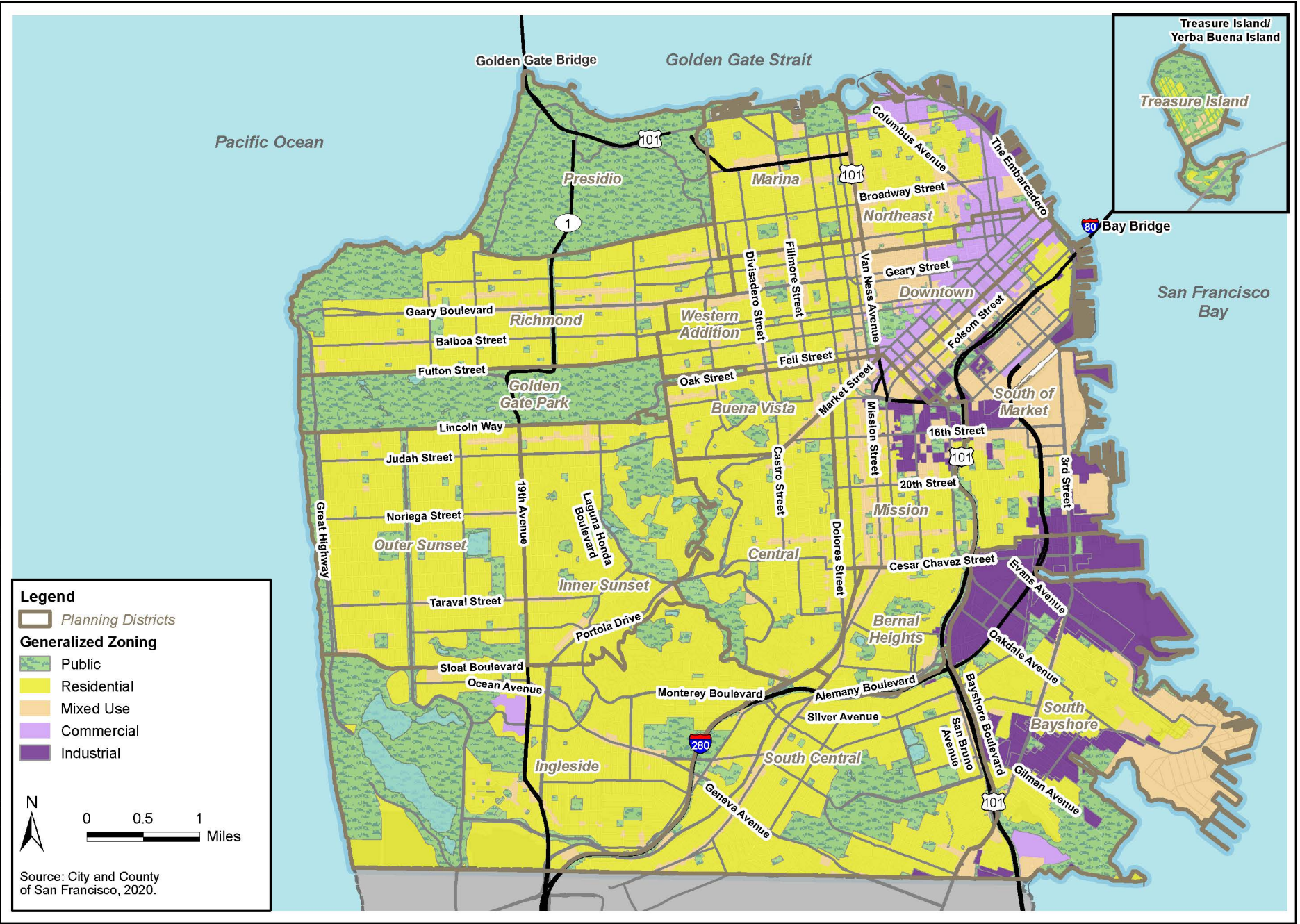
Table 2-2, p. 2-17, shows the number of housing units constructed per year between 2001 and 2020.

¹⁷ San Francisco Planning Department, *Summary of the Planning Code Standards for Residential Districts*, <https://sf-planning.org/sites/default/files/FileCenter/Documents/5358-Residential%20Standards%20Summary%20Table.pdf>, accessed September 3, 2020.

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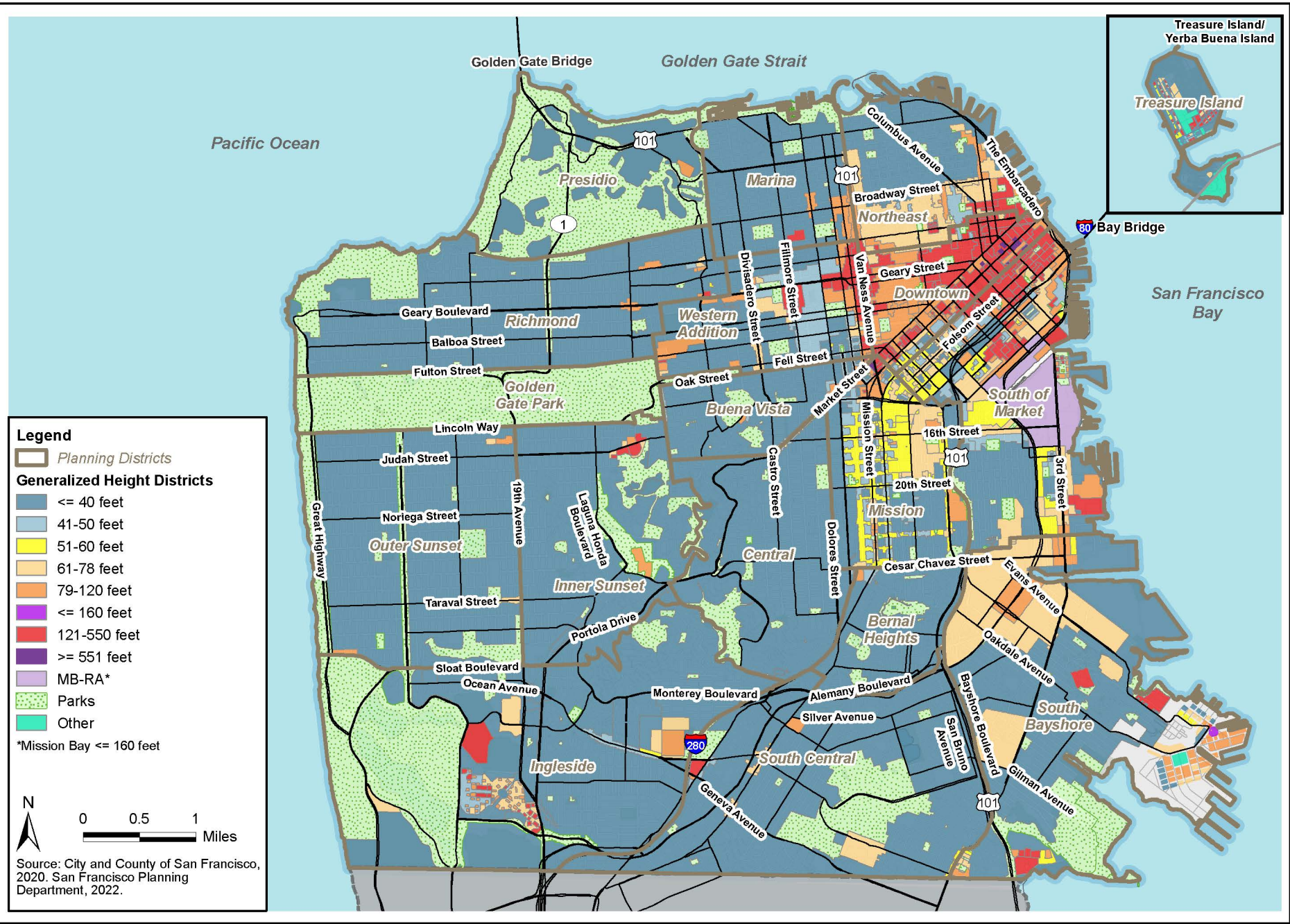


Table 2-2: San Francisco Housing Inventory from New Construction (2001–2020)

Year	Housing Units from New Construction
2001	1,169
2002	2,260
2003	2,730
2004	1,780
2005	1,872
2006	1,675
2007	2,197
2008	3,019
2009	3,366
2010	1,082
2011	348
2012	794
2013	2,330
2014	3,454
2015	2,472
2016	4,895
2017	4,270
2018	2,309
2019	4,461
2020	3,957
Total	50,890
Annual Average	2,545

Source: San Francisco Planning Department, 2020 *San Francisco Housing Inventory*, 2021, Table 2, page 19.

2050 Projected Growth Under the Existing 2014 Housing Element

Housing element law requires local governments to prepare an inventory of land suitable for residential development to help identify sites that can be developed for housing within the housing element planning period. As described in Chapter 4, Environmental Setting and Impacts, the department projected the likelihood and pattern of development of the 2050 projected growth under the existing 2014 housing element (i.e., the 2050 environmental baseline) and the proposed action. The analysis of impacts in the EIR is based on a comparison of the 2050 projected growth under the existing 2014 housing element and the proposed action; specifically, under the proposed action the department anticipates greater housing development and a different geographic distribution of housing development compared to the existing 2014 housing element.

As discussed under “2020 conditions,” above, there are approximately 407,000 housing units and 771,000 jobs in the city. Under the existing 2014 housing element, the department estimates that there would be approximately 509,000 housing units and 882,000 jobs in the city by 2050, an increase of approximately 102,000 housing units and 111,000 jobs compared to 2020 conditions. Therefore, the analysis of environmental impacts in this EIR is based on a comparison of growth under the existing 2014 housing element to growth under the housing element update. The impact analysis in the EIR uses projected future conditions, or 2050 environmental baseline, as the baseline against which environmental impacts are assessed, not existing conditions. **Figure 2-6** shows the projected difference in housing unit growth (i.e., approximately 102,000 housing units) and distribution in the city between 2020 conditions and the 2050 environmental baseline.

Pipeline Projects

As discussed under “2020 conditions,” above, the department estimates that there would be an increase of approximately 102,000 housing units by 2050 compared to 2020 conditions under the 2050 environmental baseline; of these housing units, approximately 70,800 housing units are included in the department’s current development pipeline.¹⁸ Specifically, as of December 2020, there were approximately 959 projects under construction or with approved building permits in the city, which could add up to 17,018 new housing units (see **Table 2-3**, p. 2-20). An additional 1,272 projects have been approved by the department, filed for approval, or filed for a building permit, which could result in an additional 53,782 new housing units. Collectively, these 70,800 new housing units represent the city’s pipeline projects.¹⁹ While it is possible that some of these projects may not go forward because of shifts in economic conditions or other reasons, the pipeline serves as a barometer of medium- to long-term development trends illustrating the location and scale of current and proposed future construction taking place as well as where new land uses are being established.

¹⁸ At the time modeling for the housing element update commenced, the department identified several reasonably foreseeable residential projects not in the department’s pipeline, but that were anticipated to begin environmental review. As explained in the Housing Element 2022 Update Modeling and Projections Memorandum included in Appendix C of this EIR, the department included these projects as part of the 2050 environmental baseline; these residential projects would contribute approximately 6,300 additional housing units to the department’s pipeline.

¹⁹ *Pipeline projects* include projects currently under construction, projects that have approved building permits, projects that have building department applications on file, projects that have been approved by the department, and projects that have department applications on file, <https://sfplanning.org/project/pipeline-report#current-dashboard>, accessed October 2021.

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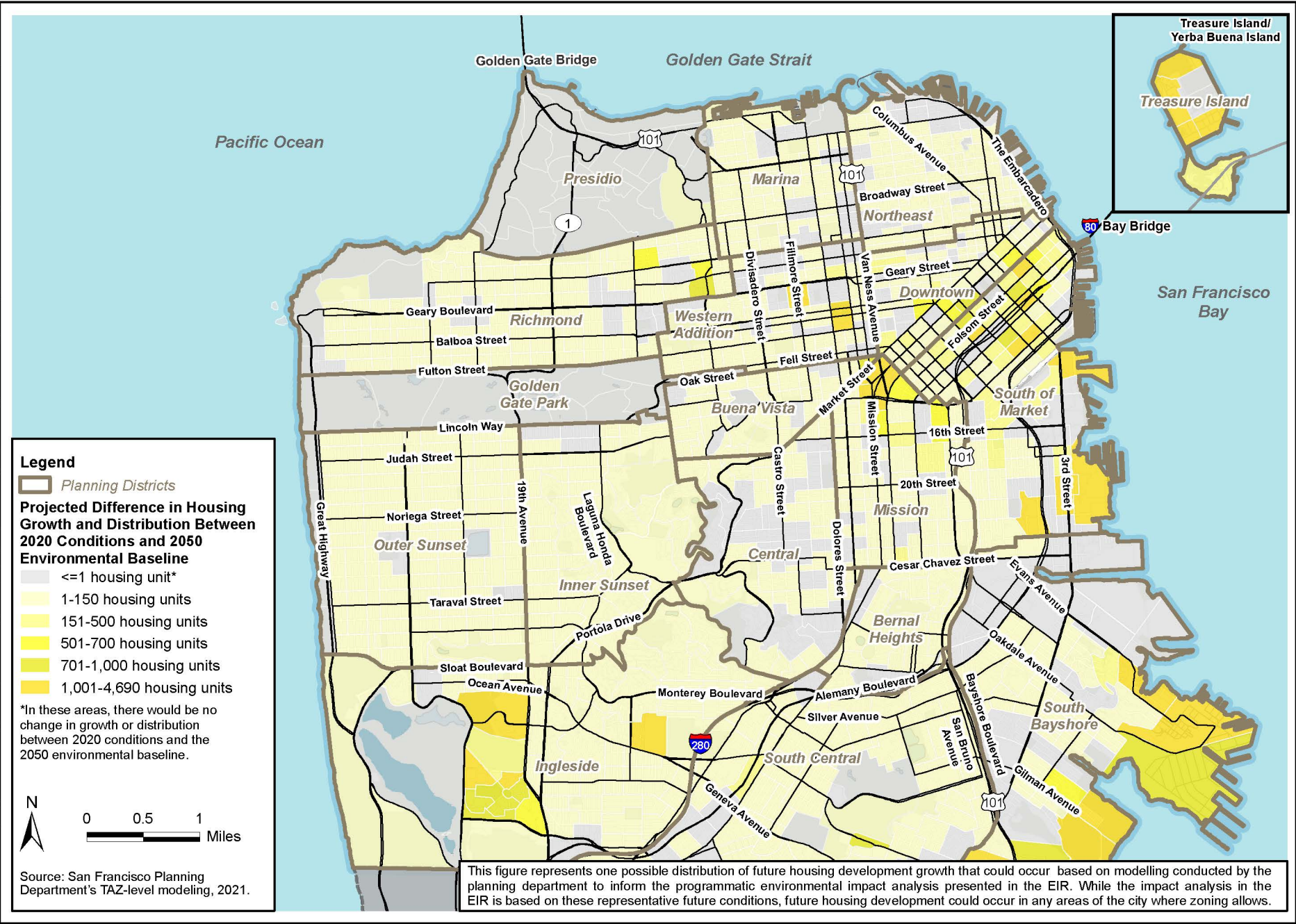


Table 2-3: Pipeline Projects

Status of Pipeline Projects (as of December 2020)	Number of Projects	Net Number of New Housing Units
Under Construction	427	9,632
Building Permit Approved/Issued	532	7,386
Building Permit Application Filed	927	10,523
Department Approved	64	29,338
Department Filed	281	13,921
Total Pipeline	2,231	70,800

Source: San Francisco Planning Department, 2020.

Note: Pipeline projects include projects currently under construction, projects that have approved building permits, projects that have building department applications on file, projects that have been approved by the department, and projects that have department applications on file.

Seven major approved projects (i.e., Candlestick Point, Treasure Island Development Area, Parkmerced, 1201A Illinois Street [Potrero Power Station], India Basin, Pier 70, and Balboa Reservoir Development) compose approximately 38 percent of the housing units in the city’s pipeline. The Candlestick Point project is in the South Bayshore planning district, the Treasure Island Development Area is in the Treasure Island planning district, the Parkmerced project is in the Ingleside planning district, the Potrero Power Station and Pier 70 projects are in the South of Market planning district, the India Basin project is in the South Bayshore planning district, and Balboa Reservoir Development project is in the Ingleside planning district. See “Land Use and Planning” in Section 4.1, Effects Found Not to Be Significant, for additional details about the seven approved major projects. The department included these major approved projects as part of the citywide modeling efforts conducted for the 2050 environmental baseline and proposed action.

F. Description of the Proposed Action

As previously noted, the housing element update establishes goals, policies, and actions to address the existing and projected housing needs of San Francisco, with a focus on racial and social equity. The housing element update does not include any specific planning code amendments, zoning changes, development projects, or other implementing measures, and no such actions are proposed at this time. The following section describes the goals, policies, and actions that would be adopted in the housing element update.

Proposed Goals, Policies, and Actions

The department is actively engaged in a community planning process to develop and finalize the specific goals, policies, and actions that will form the housing element update. The policies proposed under the housing element update aim to meet the goals identified in “Section C, Project Objectives.” Each goal also includes specific policies and implementing actions. A policy is a statement of intent, including principles or protocols that guide actions to achieve a desired outcome. Actions are a measurable and tangible activity that an agent can take toward making the policy into reality. Each policy may have more than one action, and an action can be

linked to multiple policies across different goals. The specific housing element update policies and implementing actions for each goal are included in Appendix B of this EIR.

Not all of the goals, policies, and actions included in the housing element update will lead to physical effects on the environment. Examples of housing element update policies that are relevant to the assessment of the proposed action's physical effects on the environment include:

- Policy 2. Preserve affordability of existing subsidized housing, government-owned or cooperative-owned housing, or SRO hotel rooms where the affordability requirements are at risk or soon to expire.
- Policy 3. Reform and support the City's acquisition and rehabilitation program to better serve areas and income ranges underserved by affordable housing options and areas vulnerable to displacement.
- Policy 4. Preserve the affordability of unauthorized dwelling units while improving their safety and habitability.
- Policy 7. Pursue investments in permanently affordable housing that are specific to neighborhoods that serve as entry points to recently arrived residents from certain groups, such as transgender and LGBTQ+ refugees or immigrants, or specific to populations such as transitional aged youth or transgender people.
- Policy 11. Establish and sustain homeownership housing programs designed around a reparations framework for American Indian, Black, Japanese, Filipino, and other communities directly harmed by past discriminatory government actions in the past including redlining, Redevelopment and Urban Renewal, the Indian Relocation Act, or WWII Japanese incarceration, as a means of redressing the harms and with the goal of stabilizing these communities and bringing back those who have been displaced from the city.
- Policy 12. Invest in cultural anchors and expand access to land and spaces that hold cultural importance for American Indian, Black, Japanese, Filipino, and other communities directly harmed by discriminatory government actions in the past including redlining, Redevelopment and Urban Renewal, the Indian Relocation Act or WWII Japanese incarceration as a means of redressing histories of dispossession, social disruption, and physical displacement based on a reparations framework.
- Policy 15. Expand permanently affordable housing investments in Priority Equity Geographies²⁰ to better serve American Indian, Black, and other People of color within income ranges underserved, including extremely-, very low-, and moderate-income households.
- Policy 17. Expand investments in Priority Equity Geographies to advance equitable access to resources while ensuring community stability.
- Policy 18. Tailor zoning changes within Priority Equity Geographies and intersecting Cultural Districts to serve the specific needs of American Indian, Black, and other communities of color.
- Policy 19. Enable low and moderate-income households, particularly American Indian, Black, and other people of color, to live and prosper in Well-resourced Neighborhoods by increasing the number of permanently affordable housing units in those neighborhoods.

²⁰ More information about priority equity geographies is available at: <https://sfhousingelement.org/priority-equity-geographies>.

- Policy 20. Increase mid-rise and small multi-family housing types in Well-resourced Neighborhoods near transit, including along SFMTA Rapid Network and other transit, and throughout lower-density areas, by adopting zoning changes or density bonus programs.
- Policy 21. Prevent the potential displacement and adverse racial and social equity impacts of zoning changes, planning processes, or public and private investments especially for populations and in areas vulnerable to displacement.
- Policy 22. Create a dedicated and consistent local funding stream and advocate for State and Federal funding to support building permanently affordable housing for very low-, low-, and moderate-income households that meets the Regional Housing Needs Allocation targets.
- Policy 23. Retain and increase the number of moderate- and middle-income households through building permanently affordable workforce housing and reversing the shortage in affordable housing built for these households.
- Policy 24. Support mixed-income development projects to maximize the number of permanently affordable housing constructed, in balance with delivering other permanent community benefits that advance racial and social equity.
- Policy 25. Reduce development constraints such as lengthy City-permitting process and high construction costs to increase housing choices and improve affordability.
- Policy 26. Facilitate small and mid-rise multi-family buildings as a prominent housing type that private development can deliver to serve middle-income households without deed restriction, including through expansion or demolition of existing lower density housing, or by adding Accessory Dwelling Units (ADUs).
- Policy 27. Promote and facilitate aging in place for seniors and multi-generational living that supports extended families and communal households.
- Policy 28. Prevent the outmigration of families with children and support the needs of families to grow.
- Policy 29. Encourage co-housing to support ways for households to share space, resources, and responsibilities, especially to reinforce supportive relationships within and across communities and generations.
- Policy 30. Require new commercial developments and large employers, hospitals, and educational institutions to help meet housing demand generated by anticipated job growth to maintain an appropriate jobs-housing fit, and address housing needs of students.
- Policy 32. Facilitate neighborhoods where proximity to daily needs and high-quality community services and amenities promotes social connections, supports caregivers, reduces the need for private auto travel, and advances healthy activities.
- Policy 33. Ensure transportation investments advance equitable access to transit and are planned in parallel with increase in housing capacity to create well-connected neighborhoods consistent with the City's Connect SF vision, and encourage sustainable trips in new housing.

- Policy 34. Support the repair and rehabilitation of housing to ensure life safety, health, and well-being of residents, especially in Environmental Justice Communities,²¹ and to support sustainable building practices.
- Policy 35. Enforce and improve planning processes and building regulations to ensure a healthy environment for new housing developments, especially in Environmental Justice Communities.
- Policy 36. Shape urban design policy, standards, and guidelines to enable cultural and identity expression, advance architectural creativity and durability, and foster neighborhood belonging.
- Policy 37. Support cultural uses, activities, and architecture that sustain San Francisco's dynamic and unique cultural heritages.

Information regarding the housing element update policies is available at <https://www.sfhousingelement.org/>.

In addition to the goals, policies, and actions to be included as updates to the housing element itself, the housing element update would require conforming amendments to policies in other general plan elements (i.e., elements other than the housing element). The revisions are minor in nature and are not expected to have any environmental impacts that are separate and distinct from the impacts of the housing element update analyzed in this EIR. To the extent the conforming amendments could lead to physical effects on the environment, those effects would be similar to the effects of the housing element amendments themselves, and are analyzed in this EIR.

Future Actions that Would Implement the Housing Element Update's Goals, Policies, and Actions

As previously discussed, the department assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and modify density controls in low-density areas that are primarily located on the north and west sides of the city, designation of housing sustainability districts, and approval of development projects consistent with the goals, policies, and actions of the housing element update described above. The reasonably foreseeable environmental impacts that could occur as a result of these future actions are evaluated in the EIR. The following section describes these anticipated future actions.

²¹ More information about environmental justice communities is available at: <https://sfplanning.org/project/environmental-justice-framework-and-general-plan-policies#ej-communities>.

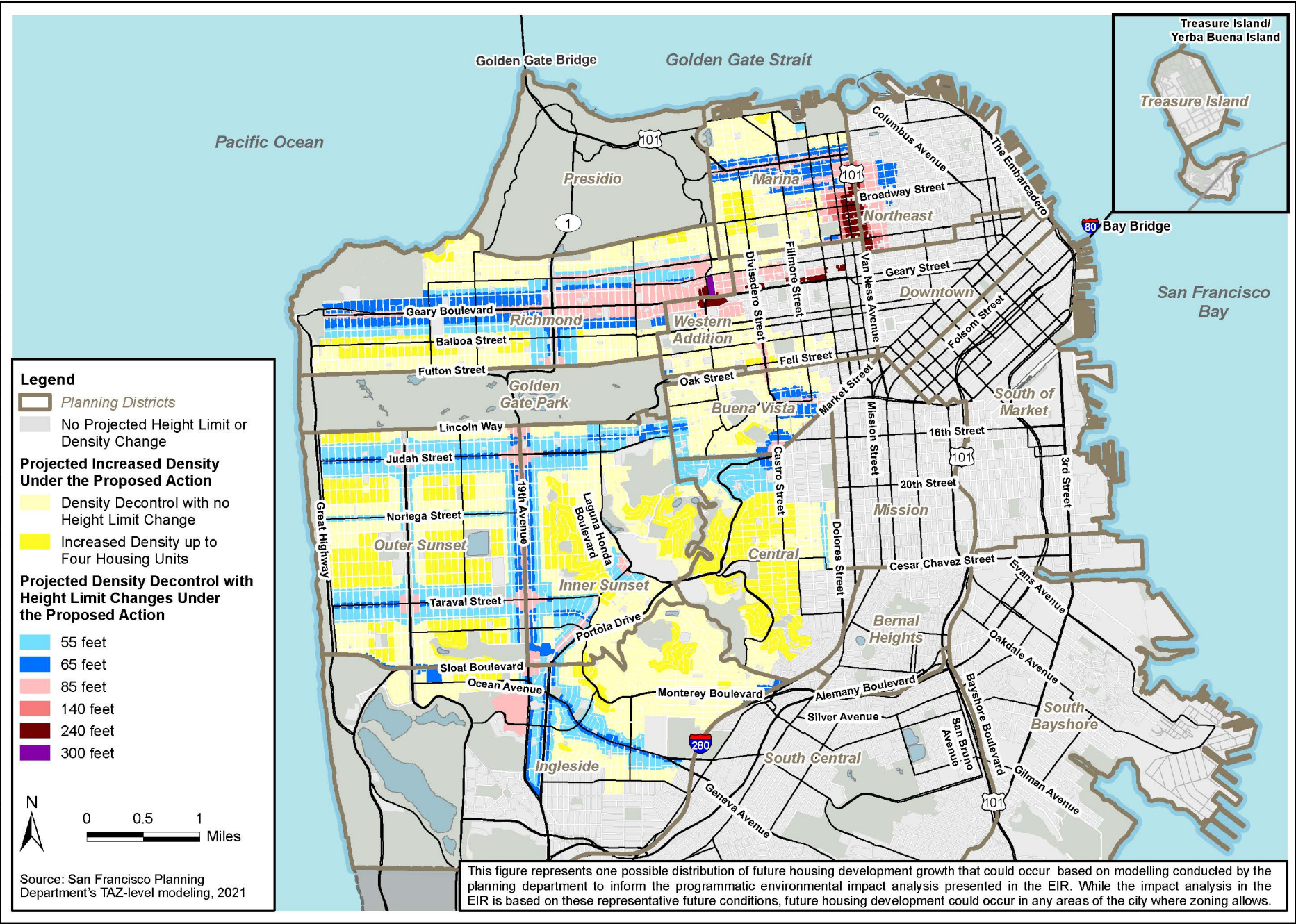
CHANGES IN LAND USE DENSITY AND DISTRIBUTION

In general, although housing development would occur in all areas of the city where allowed by zoning, the housing element update would endeavor to shift an increased share of the city's future housing growth to transit corridors and low-density residential districts within well-resourced areas. Future development consistent with the housing element update would predominately consist of residential projects, some with ground floor neighborhood services (e.g., retail or small medical offices) and could include buildings with heights ranging from 55 to 300 feet high, with the tallest buildings projected located along Geary Boulevard and Van Ness Avenue. **Figure 2-7** shows the projected heights and density controls for future development consistent with the housing element update.

Compared to the existing 2014 housing element, the proposed action would direct a greater portion of the projected growth for the city to the well-resourced areas. To achieve that outcome, a foreseeable change in land use and density could include the following:

1. Modifying allowable density limits and increasing allowable height limits along existing and projected rapid network transit corridors and certain transit nodes
2. Removing or increasing allowable density limits, without increasing allowable height limits, in low-density areas (Residential Housing [RH], Residential Mixed [RM], and Neighborhood Commercial [NC] districts) within approximately 800 feet of these corridors
3. Increasing allowable density limits in low-density areas (RHs) to four housing units in areas beyond 800 feet of these corridors

Low-density areas in well-resourced areas include RH and RM zoning districts and NC)(NC-1 through NC-3) districts.



The existing and projected rapid network transit corridors in well-resourced areas include:

- Van Ness Avenue
- California Street
- Geary Boulevard
- Irving/Judah streets
- Taraval Street
- Park Presidio and 19th Avenue
- Ocean Avenue
- Union Street
- Lombard Street
- Church Street
- West Portal Avenue
- Transit Nodes:
 - 500-foot radius at Castro and Market streets
 - 500-foot radius of Forest Hill Station
 - 500-foot radius of 19th Avenue and Taraval Street

The corridors identified above are located in well-resourced areas, which currently provide amenities for local residents. An increase in housing units along these corridors and nodes could result in the development of new or improved amenities, such as transit centers, playgrounds, recreation centers, and health clinics, or the development of additional commercial and retail uses. Future development consistent with the housing element update could consist of more housing in the form of small and midrise multi-family buildings²² throughout these neighborhoods.

SITE INVENTORY

In accordance with housing element update Policy 20d and in accordance with the sites inventory requirements under California Government Code sections 65583(c)(1)(A) and 65583.2(h), the housing element update will include a proposed rezoning program demonstrating how the city would meet its RHNA and affirmatively furthering fair housing laws. The proposed zoning program will identify specific changes to height, density, and development controls consistent with the housing element update that would accommodate approximately 20,000 new housing units. This EIR may be used to streamline the environmental review for the adoption of the

²² The number of housing units allowed on residential lots would be based on rules for controlling the form of buildings, including height, bulk, setbacks, design, and open space, as well as requirements for multi-bedroom housing units.

proposed rezoning program. The approximately 20,000 new housing units to be accommodated in the proposed zoning program are a portion of the approximately 50,000 additional housing units projected by 2050 under the proposed action and evaluated in this EIR. In addition, the department anticipates that this EIR will be used to streamline the environmental review for future zoning and other land use control changes that would implement the objective of the housing element update to further support the production of an average of 5,000 housing units per year through 2050.

HOUSING SUSTAINABILITY DISTRICTS

Another foreseeable future outcome of the housing element update could be the designation of one or more of the areas identified in **Figure 2-8**, p. 2-28, as a housing sustainability district under California Government Code sections 66200 through 66210, that could be used to streamline the environmental review and approval of residential development projects. No specific housing sustainability districts are proposed as part of the housing element update, but the EIR identifies where such districts may be considered in the future. A housing sustainability district is a designated area in a city created by ordinance and within 0.5 mile of public transit in which at least 20 percent of all housing units would be affordable for very low-, low-, and moderate-income households for at least 55 years. **Figure 2-8** identifies the areas that could be included in possible housing sustainability districts.

Designation of any future housing sustainability districts would require adoption of an ordinance by the board of supervisors amending the planning, and business and tax regulations code. In addition, future designation of any housing sustainability districts would be subject to environmental review in accordance with CEQA. This EIR may be used to inform and streamline the environmental review for the adoption of future housing sustainability districts that would implement the goals, policies, and actions of the housing element update.

Should any of these areas be designated as a housing sustainability district, the supporting ordinance would include zoning and design review standards as well as affordability requirements. Eligible projects seeking entitlement under the housing sustainability district that meet the zoning and design review standards would be approvable through a ministerial process. Pursuant to California Government Code sections 66202 to 66210 and CEQA sections 21155.10 and 21155.11, subsequent projects in the designated housing sustainability district areas that meet the requirements of a housing sustainability district would not require further environmental review but would be required to implement applicable mitigation measures determined to be necessary to reduce significant impacts identified in the housing sustainability district EIR.

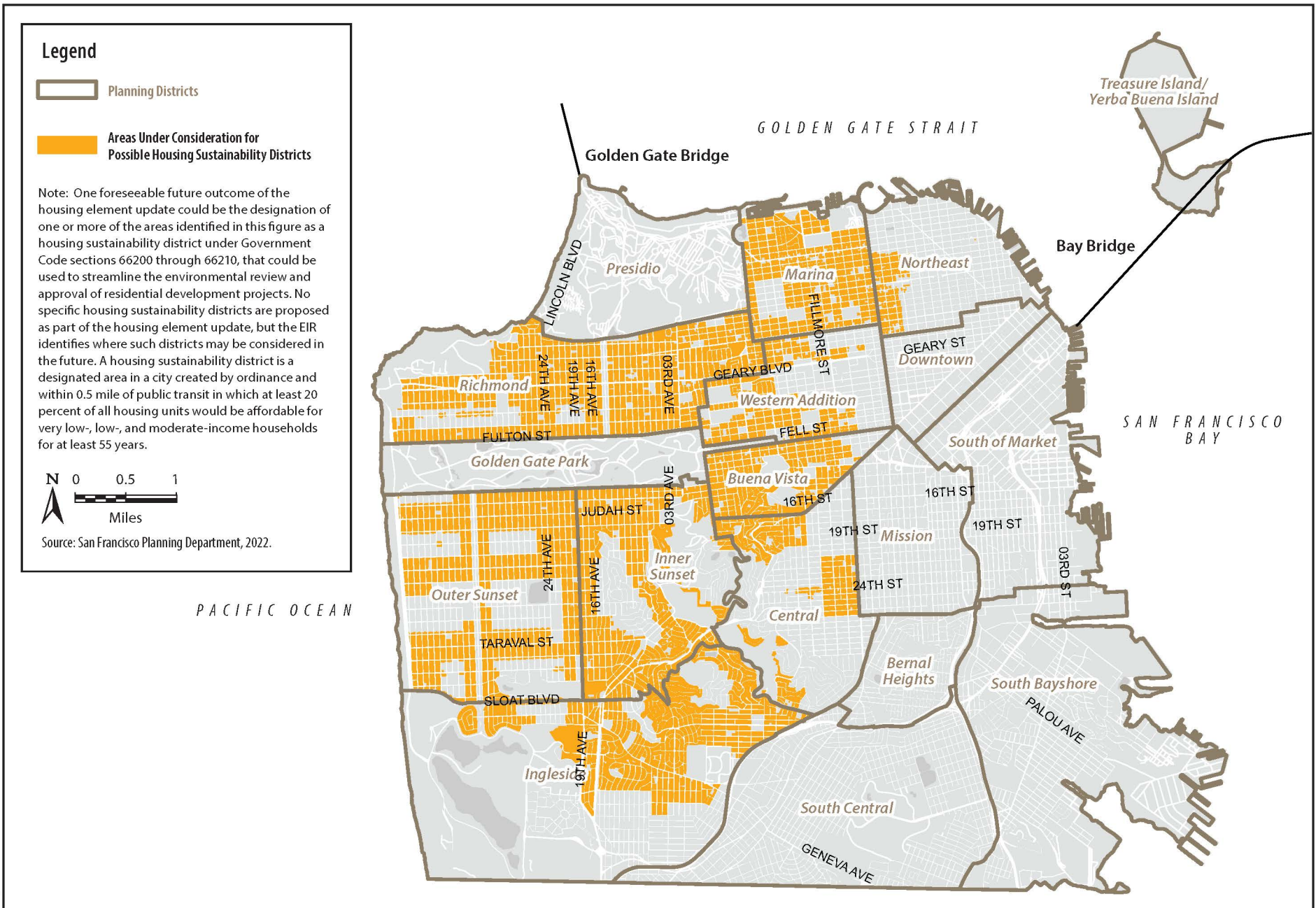


Figure 2-8
Areas of the City Under Consideration for Possible Housing Sustainability Districts

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Housing Growth

Table 2-4 shows the projected change in housing units between the 2050 environmental baseline, which assumes that housing development would continue to occur under the policies and implementing measures of the existing 2014 housing element, and the proposed action by planning district. Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions (i.e., an average of approximately 5,000 housing units per year through 2050, which would be approximately 1,600 more housing units per year through 2050 compared to the 2050 environmental baseline). The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (2050 environmental baseline). In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated under the existing 2014 housing element by 2050.

Figure 2-9, p. 2-31, shows the projected density of housing units for future development consistent with the housing element update. **Figure 2-10**, p. 2-32, shows the projected difference in housing unit growth and distribution between 2020 conditions and the proposed action (i.e., approximately 150,000 housing units). **Figure 2-11**, p. 2-33, shows the projected difference in housing unit growth and distribution between the 2050 environmental baseline and the proposed action (i.e., approximately 50,000 housing units). Compared with the development anticipated under the existing 2014 housing element by 2050 shown in **Figure 2-6**, p. 2-19, the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas that are primarily located on the west and north sides of the city. Specifically, as shown in **Table 2-4**, p.2-30, and **Figure 2-11**, p. 2-32, a greater share of new housing units under the proposed action would be concentrated in the Ingleside, Inner Sunset, Marina, Outer Sunset, Richmond, and Western Addition planning districts when compared to the 2050 environmental baseline. While the impact analysis in the EIR is based on these representative future conditions, the depictions are not intended to be precise maps of where future development would occur. Rather, the depictions are used to identify the types and magnitude of impacts anticipated from the increased density and redistribution of housing growth under the proposed action compared to the 2050 environmental baseline.

Figure 2-12, p. 2-34, shows a diagram of the total projected housing units under the 2050 environmental baseline and the proposed action. As shown, approximately 102,000 additional housing units are anticipated under the 2050 environmental baseline and approximately 150,000 additional housing units are anticipated under the proposed action. Approximately 70,800 housing units are included in the department's current development pipeline and are projected to occur under either the 2050 environmental baseline or the proposed action.

Future development consistent with the housing element update would predominately consist of residential projects, some with ground floor neighborhood services (e.g., retail or small medical offices). As described in Chapter 4, Environmental Setting and Impacts, the department used computer modeling to project the likelihood and pattern of development under the proposed action. More information about the modeling and growth assumptions the department used to project the likelihood and pattern of development under the 2050 environmental baseline and housing element update is included in the Housing Element 2022 Update Modeling and Projections Memorandum included in Appendix C of this EIR.

Table 2-4: Difference in Net New Housing Units Between 2050 Environmental Baseline and the Proposed Action by Planning District

Planning District	Net New Housing Units ^{1,2}
Bernal Heights	-200
Buena Vista	1,600
Central	3,400
Downtown	-1,800
Golden Gate Park	0
Ingleside	8,900
Inner Sunset	11,900
Marina	4,200
Mission	-1,300
Northeast	800
Outer Sunset	10,900
Presidio	0
Richmond	12,400
South Bayshore	-600
South Central	-600
South of Market	-5,800
Treasure Island	0
Western Addition	6,100
Total	50,000

Source: San Francisco Planning Department, 2021.

Notes:

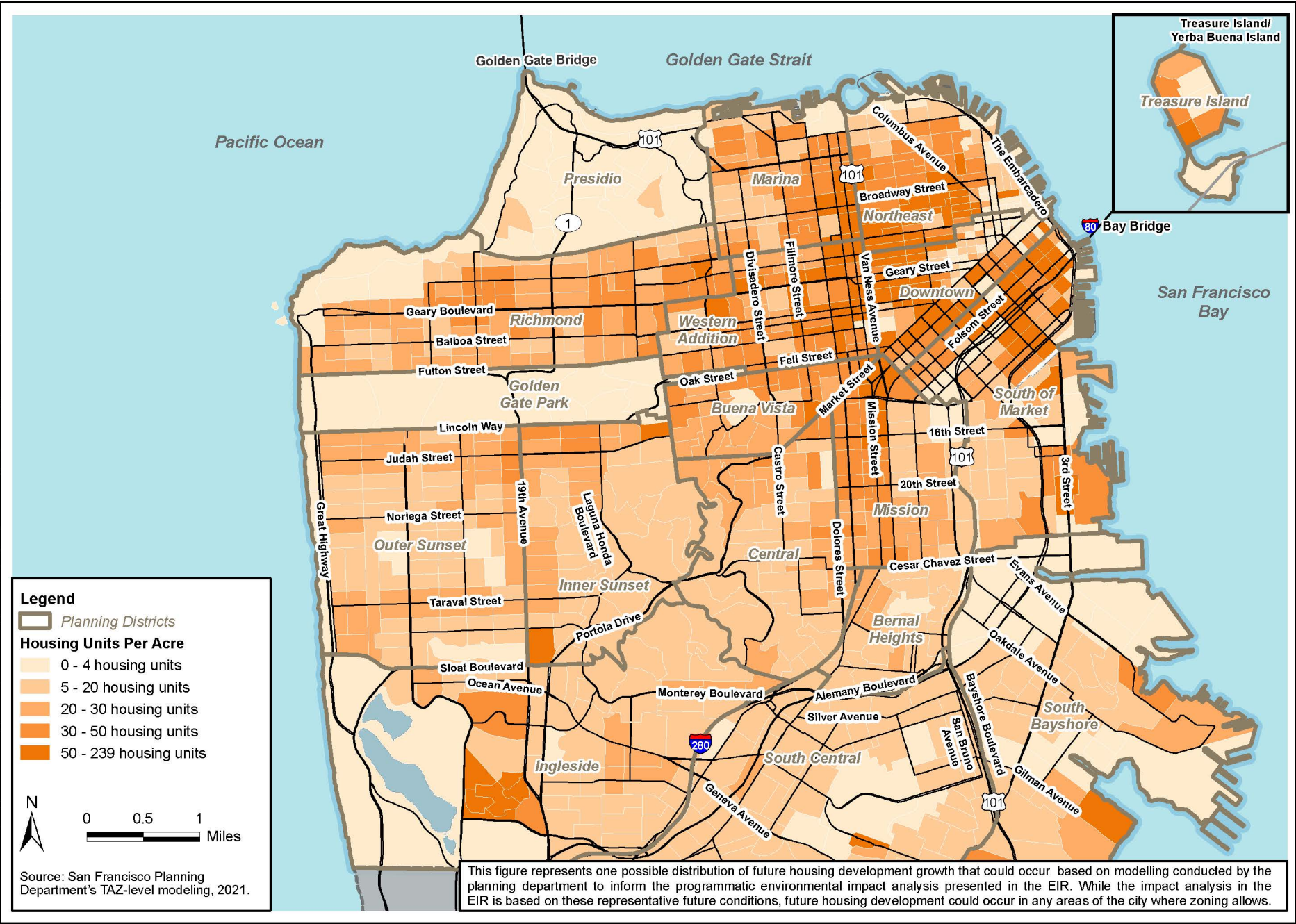
¹ Numbers have been rounded and will not sum to the total.

² The negative numbers in this table indicate that the planning district is anticipated to have fewer new housing units under the proposed action compared to the 2050 environmental baseline. The negative numbers do not indicate that the planning district would lose existing housing units.

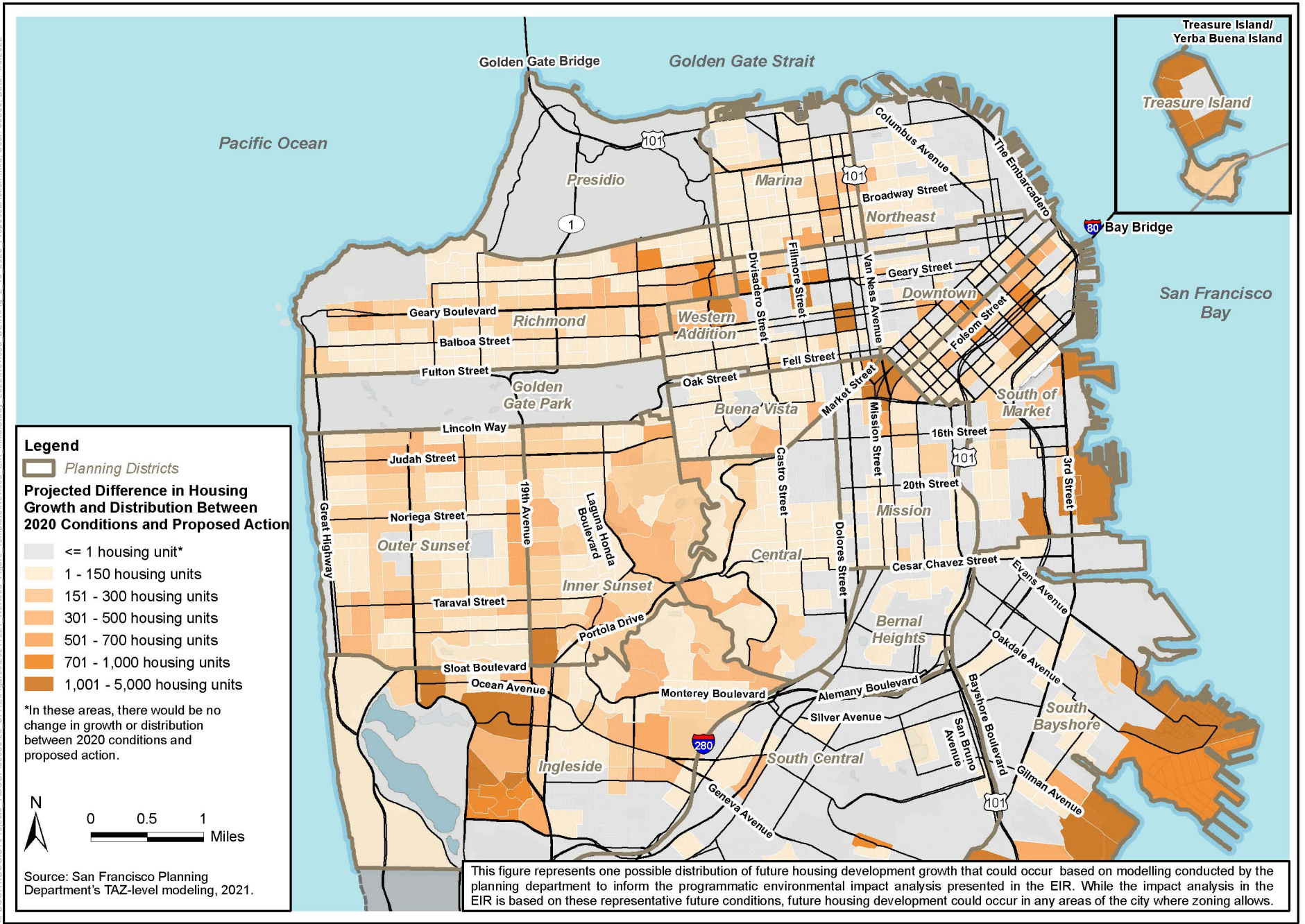
Jobs

The housing element update focuses on housing production and distribution and does not include policies or actions that would substantially change the number or location of jobs in the city relative to the 2050 environmental baseline. Although the department anticipates that there would be an incremental increase in demand for neighborhood services (e.g., retail services) in the north and west sides of the city where increased residential growth would be directed under the proposed action, the resulting changes in the number and distribution of jobs across planning districts under the proposed action would be negligible relative to the total jobs under the 2050 environmental baseline. Therefore, this EIR assumes that the number and distribution of jobs in the city would be essentially the same under both the 2050 environmental baseline and the proposed action.

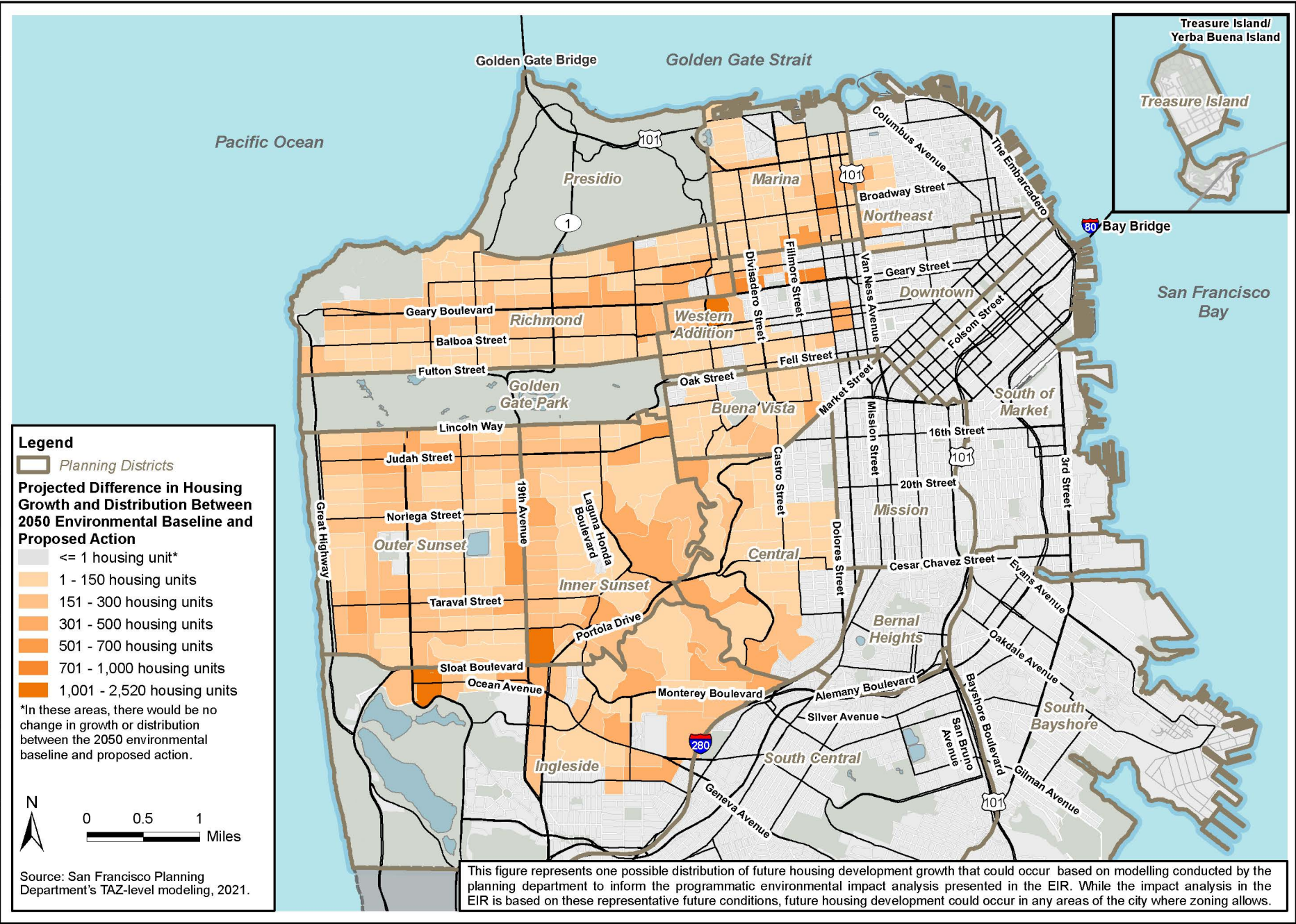
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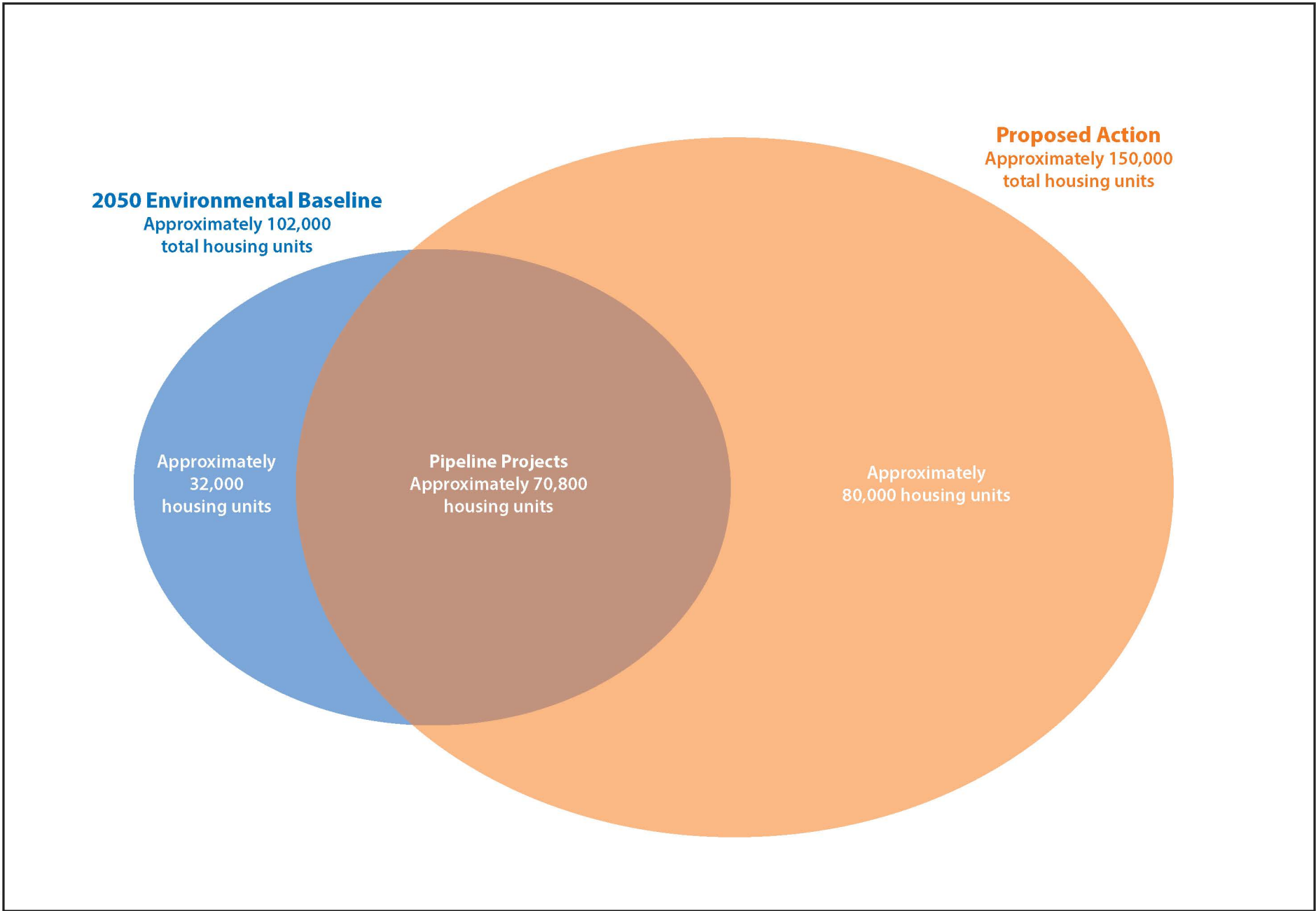


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Figure 2-12
Venn Diagram of 2050 Environmental
Baseline and Proposed Action Housing Units

G. Project Approvals

General plan amendments must first be initiated by the planning commission. Prior to considering project approvals, the planning commission would then certify the final EIR, and thereafter would consider recommending the general plan amendments to the board of supervisors. The board of supervisors would consider adopting an ordinance amending the general plan to include the housing element update. The board of supervisors may approve or reject, but may not modify the housing element update as recommended by the planning commission, pursuant to planning code section 340(d). The housing element must also be certified as compliant with state housing element law by HCD.

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3. PLANS AND POLICIES

In accordance with California Environmental Quality Act (CEQA) Guidelines section 15125(d), this chapter describes any inconsistencies between the San Francisco Housing Element 2022 Update (housing element update or proposed action) and applicable plans and policies. This analysis evaluates the objectives and policies of the San Francisco General Plan (general plan), as well as other applicable local and regional plans, to determine if there would be any inconsistencies from implementing the proposed action. This chapter also discusses compliance with the San Francisco Planning Code (planning code), which implements the general plan. The San Francisco Planning Commission (planning commission), San Francisco Planning Department (department), and other decision makers will review the proposed action for consistency with the objectives, policies, and principles of the general plan. The specific policy inconsistencies identified in this environmental impact report (EIR) are referenced in the staff reports prepared in conjunction with the housing element update's approval documentation.

Inconsistency with a policy, plan, or regulation does not necessarily result in a significant impact pursuant to CEQA. To result in an impact under CEQA, the inconsistency must be related to a direct or indirect physical impact on the environment and result in a significant, adverse impact (as determined by application of the significance criteria in this EIR for the affected resource). The potential physical impacts on the environment related to such conflicts are considered in Chapter 4, Environmental Setting and Impacts. As described in Chapter 2, Project Description, this EIR analyzes the proposed action.

The plan and policy consistency analyses below apply to the proposed action. The determination of a project's consistency with an applicable local general plan or policy or regional plan is ultimately made independently of the environmental review process by the project decision makers when they decide whether to approve or disapprove a project.

A. San Francisco Plans and Policies

San Francisco General Plan

The general plan is both a strategic and long-term document, broad in scope and specific in nature. The general plan is the embodiment of the city's collective vision for the future of San Francisco, and comprises a series of elements, each of which deal with a particular topic, that applies citywide. The general plan contains the following 10 elements that set forth goals, policies, and objectives for physical development of the city: housing, transportation, recreation and open space, environmental protection (includes noise), safety and resilience, commerce and industry, urban design, community facilities, arts, and air quality. The department is currently preparing a heritage and conservation element, which, if adopted, would add a new element to the general plan. In addition, California Government Code section 65302 requires that cities and counties adopt policies in their general plan to address environmental justice. In response, the city is developing an environmental justice framework to identify key goals and priorities and related general plan policies. As of publication of this EIR, the environmental justice framework has not been adopted. In addition, a Land Use Index cross-references the

policies related to land use located throughout the general plan. The general plan also includes area plans that outline goals and objectives for specific geographic planning areas; a brief description of the city’s adopted area plans is included under “Land Use and Planning” in Section 4.1, Effects Found Not to Be Significant. **Figure 3-1** shows the areas in the city with adopted area plans.

State law requires that a general plan and its constituent elements “... comprise an integrated, internally consistent and compatible statement of policies for the adopting agency.”¹ The housing element must therefore be consistent with goals and policies set forth in all other general plan elements, including area plans.² However, the general plan contains many policies that may, in some cases, address different goals, policies, and objectives and thus some policies may compete with each other. The planning commission and San Francisco Board of Supervisors (board of supervisors), in deciding whether to approve the housing element update, must decide whether, on balance, the proposed action is consistent with the general plan. The fact that a specific project does not meet all general plan goals, policies, and objectives does not inherently result in a significant effect on the environment within the context of CEQA.

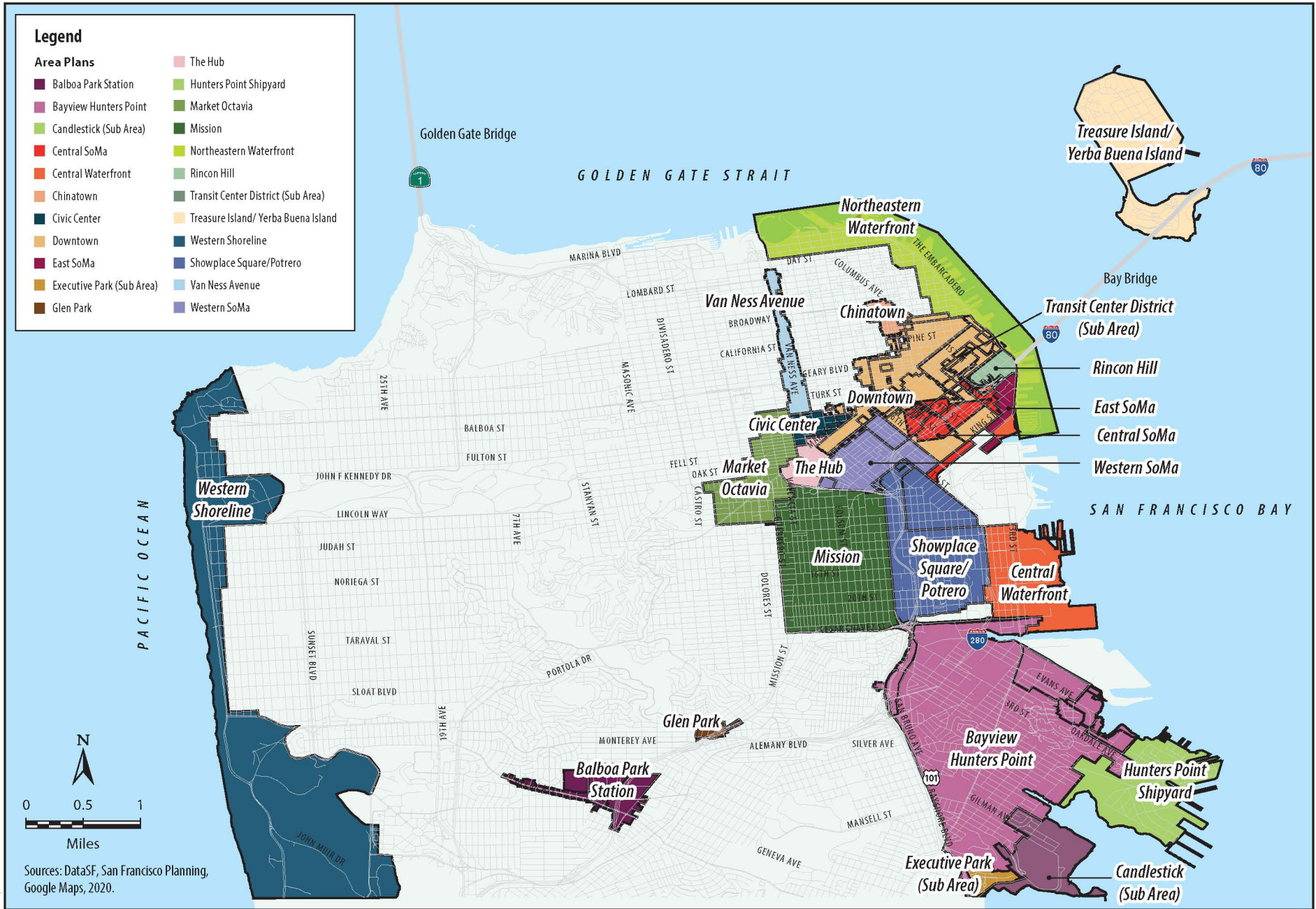
As explained in Chapter 2, Project Description, the housing element update includes overarching goals for the future of housing in San Francisco that respond both to state law requirements as well as local community values as understood from community outreach conducted for the housing element update. The underlying policies and actions would guide development patterns and the allocation of resources to San Francisco neighborhoods. In general, the housing element update would shift an increased share of the San Francisco’s projected future housing growth to transit corridors and low-density residential districts within well-resourced areas (see **Figure 2-1**, p 2-2, in Chapter 2). To meet the equity objectives, the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city.

The housing element update would modify the policies of the general plan’s housing element. It would not implement specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure).³ As such, the proposed action would not result in any direct physical changes to the environment. Instead, the housing element update would result in reasonably foreseeable indirect changes. Specifically, the department assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and to modify density controls in low-density areas that are primarily located on the west and north sides of the city, designation of housing sustainability districts, and approval of development projects consistent with the goals, policies, and actions of the housing element update.

¹ California Government Code section 65584.

² Area plans are comprehensive policy visions that guide the development and evolution of specific neighborhoods. These efforts, which are generally adopted as part of a city’s general plan, make changes to zoning and design policies, account for needed infrastructure improvements, and establish financial and implementation frameworks.

³ Any changes to existing land use controls would require related legislative processes including review and public hearings before the planning commission and/or the board of supervisors. Approval of housing development or infrastructure would require development applications and approval. This EIR analyzes the secondary physical environmental impacts that could occur as a result of the housing element update.



ENVIRONMENTAL PROTECTION ELEMENT

The environmental protection element of the general plan contains objectives and policies related to natural resource conservation and transportation noise; it also includes a comprehensive energy management plan. It states that the city should encourage the development and use of urban mass transportation systems in the downtown area and restrict the use of motor vehicles where such use would impair air quality. It also aims to reduce transportation related noise. Future development consistent with the housing element update would not conflict with these objectives and policies as it would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. Thus, the proposed action would not conflict with the environmental protection element's objectives and policies relating to transportation noise and air quality impacts.

AIR QUALITY ELEMENT

The goal of the air quality element of the general plan is to “give high priority to air quality improvement in San Francisco to protect its population from adverse health and other impacts of air pollutants.” The element seeks to achieve this goal through adherence to air quality standards, improvements related to mobile sources, land use planning, public awareness, reductions in dust, and energy conservation. Among the key policies in the air quality element is the following:

Policy 3.5: Continue existing growth management policies in the city and give consideration to the overall air quality impacts of new development including its impact on the local and regional transportation system in the permit review process. Ensure that growth will not outpace improvements to transit or the circulation system.

The air quality element contains a policy to exercise air quality modeling in building design for sensitive land uses to protect residents; this is implemented in Health Code Article 38 and further addressed in Section 4.6, Air Quality. The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. Thus, future development consistent with the housing element update would increase the share of residential development in areas with generally lower levels of air pollution, and, would locate more housing in San Francisco, which has the lowest vehicle miles traveled per capita within the region, when compared to the 2050 environmental baseline.

The housing element update promotes an equitable distribution of housing throughout the city, which encourages development along transit corridors (Policies 20 and 33). Such amendments may require certain new housing to include additional transportation demand management measures and driveway and loading operations plans, protect pedestrian, cycling, and transit-oriented street frontages from driveways, and reduce vehicular parking. These policies related to VMT and induced automobile travel would reduce emissions which contribute to air quality impacts.

Compatibility of the proposed action with the goals and principles in the air quality element will be considered by decision makers. However, based on the above, the proposed action would not conflict with the overarching

goals and principles of the air quality element, in that the housing element update would achieve growth with lesser air quality impacts than a comparable degree of growth in areas less well-served by transit. In general, the proposed action would not impede the implementation of the air quality element of the general plan or conflict with the goals and principles of the air quality element.

RECREATION AND OPEN SPACE ELEMENT

The recreation and open space element of the general plan contains objectives and policies for maintaining, creating, and enhancing recreational and open space resources in the city. The recreation and open space element was last adopted in April 2014, and updated in January 2019. The primary focus of the update was to encourage high performance in the city's existing open space system; set priorities for areas to be acquired for new park and recreational facilities; improve the connectivity of the open space network, including public streets and rights-of-way; enhance biodiversity; and identify methods to acquire, improve and maintain recreational facilities, such as through the development of impact fees or through public/private partnerships.

As described in Section 4.8, Shadow, the recreation and open space element of the general plan includes Policy 1.9, which requires that solar access to public open space be protected. The policy promotes protecting solar access and avoiding shade to maintain the usability of public open space and states that the requirements of planning code section 295 apply to the review of projects that could shade San Francisco Recreation and Park Department property. The policy acknowledges that the city should support protection of sunlight to more parks, especially during hours of intensive use, while balancing the need for new development to accommodate the city's growing population. Future development consistent with the housing element update is projected to include increases in housing density and building heights. The extent and duration of shadows cast on public open spaces would increase if taller buildings are constructed.

As discussed in Section 4.8, implementation of Mitigation Measure M-SH-1 would be effective at reducing or avoiding the potential for significant shadow impacts by requiring redesign to reduce or avoid the creation of new shadow that would substantially and adversely affect the use and enjoyment of publicly accessible open spaces. However, the specific height, massing, and orientation of individual future projects consistent with the housing element update is currently unknown, and thus there are uncertainties regarding the feasibility of redesigning individual projects to reduce or avoid significant shadow impacts. Therefore, the ability of Mitigation Measure M-SH-1 to reduce the shadow impact to a less-than-significant level is uncertain and must be evaluated on a project-by-project basis. As discussed in Section 4.8, the proposed action would result in a shadow impact that is significant and unavoidable with mitigation. Compatibility of the proposed action with the goals and principles in the recreation and open space element will be considered by decision makers. However, based on the above, the proposed action would not conflict with the overarching goals and principles of the recreation and open space element, in that the housing element update would implement mitigation to reduce or avoid the creation of new shadow that would substantially and adversely affect the use and enjoyment of publicly accessible open spaces. In general, the proposed action would not impede the implementation of the recreation and open space element of the general plan or conflict with the goals and principles of the recreation and open space element.

URBAN DESIGN ELEMENT

The urban design element of the general plan is concerned with the physical character and environment of the city with respect to development and historic preservation. The urban design element addresses issues related to city pattern, conservation, major new development, and neighborhood environment.

Objective 2 of the urban design element, “Conservation of resources which provide a sense of nature, continuity with the past, and freedom from overcrowding,” includes the following policies, among others:

Policy 2.4: Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

Policy 2.5: Use care in remodeling older buildings in order to enhance rather than weaken the original character of such buildings.

Policy 2.6: Respect the character of older development nearby in the design of new buildings.

Objective 3 of the urban design element, “Moderation of major new development to complement the city pattern, the resources to be conserved, and the neighborhood environment,” includes the following policies, among others:

Policy 3.5: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development.

Policy 3.6: Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction.

Although the housing element update itself would not include any changes to height limits or other development controls related to urban design or building form, the department assumes that planning code amendments enacted in the future to implement the housing element update would include height and bulk increases and changes to density controls. As such, the goals of the housing element update to increase housing equity and affordability by concentrating an increased share of housing growth in well-resourced areas in the west and north areas of the city may compete with previous department and planning commission interpretations and implementation of urban design element policies that seek to maintain the building height, bulk, and form of the city’s existing development pattern. The planning commission and board of supervisors will be required to consider the policies of the urban design element in determining whether on balance the proposed housing element update is consistent with the general plan.

As discussed in Section 4.2, Cultural Resources, the proposed goals (Goals 3 and 4) and policies (Policies 19, 20, 24, 25, and 26) of the housing element update could result in physical effects related to unique neighborhood character, which in part derives from a neighborhood’s cultural and architectural heritage. Implementation of Mitigation Measures M-CR-1a through M-CR-1l would partially compensate for impacts associated with future development consistent with the housing element update through feasible design changes, avoidance, preservation, relocation, comprehensive documentation and memorialization of the affected resource. However, these measures may not reduce impacts related to the loss of built-environment historic resources to a less-

than-significant level in all cases. Because demolition of built-environment historic resources or alteration in an adverse manner could still occur, the impact would be significant and unavoidable with mitigation. Similar to the goals and policies of the housing element update, the urban design element policies are intended to promote preservation, but do not prohibit demolition or alteration of historic resources. Thus, the future development associated with the proposed action would not conflict with the overarching goals and principles of the urban design element of the general plan. Therefore, although future development consistent with the housing element update would result in significant and unavoidable impacts on built environment historic resources, the proposed action would not impede the implementation of the urban design element of the general plan or conflict with the goals and principles of the urban design element.

San Francisco Planning Code

The planning code and the city's zoning maps implement the general plan and govern permitted land uses, densities, and building configurations in the city. Permits to alter buildings, construct new buildings, or demolish buildings may not be issued unless 1) a project conforms to the existing planning code or amendments to the code are adopted as part of the project approvals, or 2) an allowable exception is granted pursuant to provisions of the planning code.

Shadow. Section 295 of the planning code protects certain public open spaces from shadowing by new structures. Section 295 effectively limits shadow on city parks by requiring that specific findings be made before buildings greater than 40 feet in height can be approved that would shade property under the jurisdiction of or designated to be acquired by the Recreation and Park Commission during the period from one hour after sunrise to one hour before sunset. Section 295(b) states that the planning commission, following a public hearing, "shall disapprove" any project governed by section 295 that would have an "adverse effect" due to shading of a park subject to this section, "unless it is determined that the impact would be insignificant." The planning commission's decision under section 295 cannot be made "until the general manager of the Recreation and Park Department in consultation with the Recreation and Park Commission has had an opportunity to review and comment to the City Planning Commission upon the proposed project." Shadow effects of future development consistent with the housing element update are shown graphically and analyzed qualitatively in Section 4.8, Shadow.⁴ As discussed in Section 4.8, implementation of Mitigation Measure M-SH-1 would be effective at reducing or avoiding the potential for significant shadow impacts by requiring redesign to reduce or avoid the creation of new shadow that would substantially and adversely affect the use and enjoyment of publicly accessible open spaces. However, the specific height, massing, and orientation of individual future projects consistent with the housing element update is currently unknown. In addition, there are uncertainties regarding the feasibility of redesigning projects to reduce or avoid significant shadow impacts. Therefore, the ability of Mitigation Measure M-SH-1 to reduce the shadow impact to a less-than-significant level is uncertain and must be evaluated on a case-by-case basis. As such, the proposed action would result in a shadow impact that is significant and unavoidable with mitigation.

⁴ This analysis does not present a quantitative analysis of potential shadow effects. Quantitative shadow analysis is typically required for analysis of individual buildings under section 295 or as part of project-specific review.

Light and Glare. The planning code contains a number of provisions to reduce or prevent light and glare in the city. This includes planning code section 311 and the Residential Design Guidelines, section 312 and the Neighborhood Commercial Design Guidelines, as well as the Industrial Area Design Guidelines and the planning commission prohibition on reflective glass. In addition, planning commission resolution 9212 generally prohibits the use of mirrored or reflective glass in new buildings.

Bird-Safe Buildings. Planning code section 139, Standards for Bird-Safe Buildings, focuses on buildings that create location-specific hazards and buildings feature-related hazards. As discussed under “Biological Resources” in Section 4.1, the department has identified location-related hazards within the city that present heightened risk to urban nesting birds. These “location-related” hazards are “buildings located inside of, or within a clear flight path of less than 300 feet from an urban bird refuge.”⁵ Future development that overlaps, or is less than 300 feet from an urban bird refuge, could pose an increased risk for direct and indirect effects on migratory nesting birds. In addition, future development consistent with the housing element update would result in an increase in building density and height, as well as the shift of anticipated growth from the east side of the city to the west and north sides of the city, which are areas where more urban bird refuges are located. Therefore, future development consistent with the housing element update could increase the risk of avian collisions with buildings. Compliance with planning code section 139 and the adopted Standards for Bird-Safe Buildings would ensure that impacts related to bird hazards would be less than significant.

The housing element update would modify the policies of the general plan’s housing element and make conforming changes to other elements of the city’s general plan. It would not implement specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure). As such, the proposed action would not result in any direct physical changes to the environment or conflicts with the planning code, but would result in reasonably foreseeable changes. Specifically, the department assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and to modify density controls in low-density areas that are primarily located on the west and north sides of the city, designation of housing sustainability districts, and approval of development projects consistent with the goals, policies, and actions of the housing element update. The EIR identifies these reasonably foreseeable environmental impacts that could occur as a result of future actions that would implement the proposed action and development projects that would be consistent with it.

HOUSING BONUS PROGRAMS

The planning code includes several programs that allow for an increase in density and other planning code modifications in exchange for a development including affordable housing units. Several types of density

⁵ San Francisco Planning Department, *Urban Bird Refuge*, published July 2014, <https://sfplanning.org/resource/urban-bird-refuge>.

bonuses are currently available for residential projects in San Francisco, including the 100 Percent Affordable Housing Bonus Program, HOME-SF, and the city's implementation of the state density bonus law.

- The 100 Percent Affordable Housing Bonus Program is San Francisco's local density bonus program for projects in which all of the residential units are affordable to low- and very-low-income households. This program is described in planning code section 206.4.
- HOME-SF is San Francisco's local density bonus program. It is designed to incentivize building more affordable and family-friendly housing in neighborhood commercial and transit corridors through increased density and zoning modifications. This program is described in planning code section 206.3.
- The state density bonus law offers development incentives to projects that provide onsite affordable housing. The amount of the density bonus and the number of incentives or concessions depends on the amount and level of affordability of the onsite affordable units. San Francisco has two density bonus programs that implement the state law in planning code sections 206.5 and 206.6.

The bonus programs may be used in the future, as applicable, to implement the proposed action.

Priority Policies

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added planning code section 101.1 to establish eight priority policies. Prior to issuing a permit for any project that requires an initial study under CEQA; issuing a permit for any demolition, conversion, or change in use; or taking any action that requires a finding of consistency with the general plan, the city is required to find that the plan or legislation is consistent with the priority policies. The priority policies pertain to (1) the preservation and enhancement of neighborhood-serving retail uses, (2) protection of neighborhood character, (3) preservation and enhancement of below-market-rate housing, (4) discouragement of commuter automobiles, (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership, (6) maximization of earthquake preparedness, (7) landmark and historic building preservation, and (8) protection of open space. The consistency of the proposed action with the environmental topics associated with the priority policies is discussed throughout the EIR.

Priority policies 1 and 5 are addressed under "Land Use and Planning" in Section 4.1, Effects Found Not to be Significant; priority policy 2 is addressed under "Aesthetics" in Section 4.1; priority policy 3 is addressed under "Population and Housing" in Section 4.1; priority policy 4 is addressed in Section 4.4, Transportation and Circulation; priority policy 6 is discussed under "Geology and Soils" in Section 4.1; priority policy 7 is addressed in Section 4.2, Cultural Resources; and priority policy 8 is addressed under "Recreation" in Section 4.1 as well as Sections 4.7, Wind, and 4.8, Shadow. The EIR provides information for use in the case report for the proposed action. The staff report and approval motions for the proposed action will include the department's comprehensive project analysis and findings regarding consistency of the proposed action with the priority policies.

B. Regional Plans and Policies

Plan Bay Area 2050

Plan Bay Area 2050 is the long-range integrated transportation and land-use/housing strategy through 2050 for the San Francisco Bay Area. On October 21, 2021, the Association of Bay Area Governments Executive Board and the Metropolitan Transportation Commission jointly approved Plan Bay Area 2050. Plan Bay Area 2050 forecasts a total of approximately 578,000 households in San Francisco by 2050.⁶ Plan Bay Area 2050 includes eight goals ranging from climate protection to economic vitality, with the overarching goal of increasing the capacity for jobs and housing in the entire Bay Area. This goal is driven by the need to meet the growth forecasts identified for San Francisco in Plan Bay Area 2050, the Bay Area's Sustainable Communities Strategy, prepared by Association of Bay Area Governments and Metropolitan Transportation Commission.

The approximately 578,000 households forecasted by ABAG would result in approximately 596,000 housing units, a 37,600-unit increase compared with the proposed action. In addition, Plan Bay Area 2050 assumes a different development pattern compared with the proposed action. Plan Bay Area 2050 would direct 24,000 fewer housing units than the proposed action (about 53 percent less future development) to the Ingleside, Inner Sunset, Outer Sunset and Richmond planning districts in the west side of the city. In addition, Plan Bay Area 2050 would direct substantially more future development than the proposed action to the Northeast, Downtown, Mission, South of Market, and South Bayshore planning districts. In addition, Plan Bay Area 2050 projects 6,600 net new jobs compared to the 2050 environmental baseline. For comparison, the proposed action would result in approximately 50,000 units and a similar number of jobs when compared to the 2050 environmental baseline. Plan Bay Area 2050 is evaluated in Chapter 6, Alternatives, at a programmatic level to acknowledge and disclose the similarities and differences in environmental impacts between this regional plan's projections for San Francisco and the proposed action.

C. Other Plans and Policies

Bay Area Air Quality Management District's 2017 Clean Air Plan

The 2017 Clean Air Plan includes measures to reduce ozone, particulate matter, air toxics, and GHGs; and establishes emission control measures. The 2017 Clean Air Plan aims to attain all state and national air quality standards, eliminate disparities among Bay Area communities regarding the cancer health risk from toxic air contaminants, and reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The plan requires implementation of "all feasible measures" to reduce ozone and provides a control strategy for reducing ozone, particulate matter, toxic air contaminants, and GHGs. The plan describes the status of local air quality and identifies the emission control measures.⁷ In general, new

⁶ The source of Plan Bay Area 2050 growth projections is the Metropolitan Transportation Commission. The department converted the Metropolitan Transportation Commission's household data into housing units using a 3 percent vacancy rate for analysis in this EIR.

⁷ Bay Area Air Quality Management District, *2017 Clean Air Plan: Spare the Air, Cool the Climate*, April 19, 2017, http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en, accessed March 21, 2022.

development in San Francisco incorporates many of the applicable control measures identified in the 2017 Clean Air Plan through a combination of the planning code provisions and various local and state policies that promote high-density land use patterns, allow or require reductions in off-street parking, encourage tree planting and water and energy conservation, divert waste, and promote transit, walking, and bicycling as primary modes of transport.

Section 4.6, Air Quality (Impact AQ-1) contains a comprehensive analysis of the proposed action's consistency with the 2017 Clean Air Plan. The analysis concludes that the proposed action would be consistent with 2017 Clean Air Plan control measures, would not hinder implementation of the 2017 Clean Air Plan, and would support the primary goals of the 2017 Clean Air Plan. Therefore, the proposed action would not impede the implementation of the 2017 Clean Air Plan, nor would it be inconsistent with its overarching goals and principals.

Better Streets Plan

In 2006, the board of supervisors adopted the Better Streets Policy. Since then, the board of supervisors has amended the policy several times, including in 2010 to reference the Better Streets Plan. The Better Streets Plan creates a unified set of standards, guidelines, and implementation strategies to govern how San Francisco designs, builds, and maintains its pedestrian environment. The planning code requires certain new development projects to make changes to the public right-of-way, such that it is consistent with the Better Streets Plan (planning code section 138.1). The planning code requires most projects to plant and maintain street trees and some, larger projects to submit a streetscape plan that may require elements such as sidewalk widening, transit boarding islands, and medians.

The proposed action does not include any specific changes to the street network. However, as detailed in Section 4.4, Transportation and Circulation, future development consistent with the proposed action could include changes to the adjacent street network such as new or relocated driveways, reconstructed sidewalks, and various color curb changes on streets adjacent to the development sites to accommodate on-street commercial and passenger loading activities and to comply with Better Streets Plan requirements. As applicable, design features of future development consistent with the housing element update would need to comply with the Better Streets Plan, which focuses on eliminating existing hazards and designing the transportation network to enhance safety for all ways of travel. Planning code section 138.1 provides a list of potential transportation and streetscape elements that could be incorporated into a project design by a project sponsor of an individual development project to meet the Better Streets Plan requirements. Examples of transportation elements consistent with Better Streets Plan include, but are not limited to widened sidewalks, new crosswalks, curb ramps, and shared public ways. City agencies would coordinate on providing guidance to applicable projects that affect the public right-of-way. This direction would be guided by the Better Streets Plan and other city code requirements and policy objectives. Forums for this guidance consist of the city's Streetscape Design Advisory Team, which would review streetscape changes associated with proposed applications for individual buildings with more than 50 housing units, and potentially for individual buildings with fewer than 50 housing units based on proposed project features. In addition, the city's Transportation Advisory Staff Committee would review some proposed changes to the roadway network, such as shared public ways, pedestrian-only streets, or removal of

“pork chops”⁸ and excess right-of-way. Furthermore, any changes to the public right-of-way would still need to go through subsequent approval processes, such as by public works and the SFMTA board.

Based on the above, the proposed action would not impede the implementation of the Better Streets Plan, nor would it be inconsistent with its overarching goals and principles.

Climate Action Plan

The San Francisco Department of the Environment submitted a climate action plan (CAP) to the mayor on December 8, 2021. The CAP will be updated every five years and identifies the efforts of the city’s previous CAPs, and aligns with the Paris Agreement (e.g., limit global warming to 1.5 degrees Celsius) as well as the reduction targets adopted within the GHG ordinance. The CAP also incorporates an equity framework that addresses historic inequities; prioritizes the social, economic, and environmental benefits from implementing the CAP; and ensures that those benefits are distributed equitably.⁹

As discussed under “Greenhouse Gas Emissions” in Section 4.1, the housing element update would be consistent with the city’s Climate Action Plan, which is the city’s guide to achieving net-zero GHG emissions by 2040. Thus, the proposed action would not impede the implementation of city’s Climate Action Plan, nor would it be inconsistent with its overarching goals and principles.

ConnectSF

ConnectSF is a multi-agency process to build an effective, equitable, and sustainable transportation system for San Francisco’s future. ConnectSF will identify potential transportation infrastructure investments and policies needed to meet the city’s continued growth equitably and sustainably over the next 30 to 50 years.

The ConnectSF program consists of three phases: 1) developing a vision for what the city should look and feel like in 50 years; 2) assessing the city’s transportation needs and identifying transit concepts and street and freeway concepts that could bridge those gaps; and 3) prioritizing projects and determining funding sources as well as developing and codifying transportation and related land use policies. The Transit Corridors Study and Streets and Freeways Study are anticipated to be completed by summer 2022. The outcomes of ConnectSF will be incorporated into the upcoming updates of the San Francisco Transportation Plan¹⁰ and the Transportation Element of the general plan, which comprise the third phase of the program.¹¹

As discussed in Section 4.4, Transportation and Circulation, Mitigation Measure M-TR-4c would require the department and SFMTA to develop a plan for future transit network facilities as part of rezoning efforts so that traffic volumes do not result in substantial increases in transit delay. The Tier 1 and 2 improvements included in Mitigation Measure M-TR-4c are consistent with those proposed as a part of Muni Forward and are organized to

⁸ *Pork chops* are small pedestrian islands that channelize turning vehicles at intersections.

⁹ San Francisco Department of the Environment, *San Francisco’s Climate Action Plan 2021*, https://sfenvironment.org/sites/default/files/2021_climate_action_plan.pdf, accessed March 21, 2022.

¹⁰ SFCTA, San Francisco Transportation Plan, <https://www.sfcta.org/projects/san-francisco-transportation-plan>. Accessed March 21, 2022.

¹¹ San Francisco Planning Department, San Francisco General Plan Transportation Element, <https://sfplanning.org/project/transportation-element>. Accessed March 21, 2022.

distinguish between measures that do not restrict private vehicle access (Tier 1) and those that do restrict private vehicle access such as transit-only lanes (Tier 2). The Tier 3 improvements are consistent with those major capital projects (e.g., subways) being considered as a part of ConnectSF and Link21.

The proposed housing element update includes policies that would support enhancing accessibility of people walking, bicycling, or taking transit. These policies involve the department working with the SFMTA and other public transit providers, sponsors of individual development projects, and other city and regional agencies to upgrade and expand the transportation network. The policies include:

- Ensure transportation investments advance equitable access to transit and are planned in parallel with increase in housing capacity to create well-connected neighborhoods consistent with the city's ConnectSF vision, and encourage sustainable trips in new housing (Policy 33).
- Strengthen interagency coordination for transportation, evaluating the existing and future needs of priority equity geographies, environmental justice communities, and well-resourced neighborhoods targeted for increased housing capacity, and plan for staffing and funding needed for these investments (e.g., general obligation bonds, federal grants). This includes delivering a network such that transit vehicles come every five minutes along certain corridors, and for rail consistent with the city's ConnectSF vision and its Transit Strategy (Policy 33.a).
- Restore, maintain, and optimize the existing transit system, particularly prioritize implementation of SFMTA's 5-year Capital Improvement Program's Transit Optimization and Expansion Projects in well-resourced neighborhoods targeted for increased housing capacity (Policy 33.b).
- Restore and improve transit service as identified in the city's Transit Strategy, particularly for essential workers, transit-dependent people, and priority equity geographies and environmental justice communities (Policy 33.c).
- Adopt requirements that encourage sustainable trip choices in new housing and reduce transportation impacts from new housing. Such amendments may require certain new housing to include additional transportation demand management measures and driveway and loading operations plans, protect pedestrian, cycling, and transit-oriented street frontages from driveways, and reduce vehicular parking (Policy 33.d).

Based on the above, the proposed action would not impede the implementation of ConnectSF, nor would it be inconsistent with its overarching goals and principles.

Hazards and Climate Resilience Plan

On June 16, 2020, the Hazards and Climate Resilience Plan was adopted by the mayor and board of supervisors; that plan was approved by the Federal Emergency Management Agency on July 21, 2020. The Hazards and Climate Resilience Plan is the city's roadmap to addressing the impacts of natural hazards and climate change. It identifies the hazards and risks San Francisco faces and proposes over 90 strategies to reduce risks and adapt to climate change impacts. The Hazards and Climate Resilience Plan serves as an update to the 2014 Hazard

Mitigation Plan and is one of the key implementation plans for the community safety element of the general plan. It also complements the city's CAP, discussed above.

As discussed under "Greenhouse Gas Emissions" in Section 4.1, individual projects, such as new housing developments, contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operation. Direct operational effects from individual projects include GHG emissions from new vehicle trips. Indirect effects include the GHG emissions from electricity providers, including generation of the energy required to pump, treat, and convey water; other GHG emissions are associated with waste removal, waste disposal, and landfill operations. One of the primary objectives of the proposed action is to increase housing production in the city to an average of approximately 5,000 housing units per year through 2050, which would result in approximately 50,000 more housing units than the 2050 environmental baseline. Therefore, the city would be able to provide a larger share of the regional housing need with the characteristics discussed below to reduce the intensity of GHG emissions compared to baseline conditions.

Based on the above, the proposed action would not impede the implementation of the Hazards and Climate Resilience Plan, nor would it be inconsistent with its overarching goals and principles.

Regional Transportation Plan

The 2035 Regional Transportation Plan prepared by the Metropolitan Transportation Commission is a policy document that outlines transportation projects for highway, transit, rail, and related uses through 2035 for the nine Bay Area counties.

As discussed in Section 4.4, Transportation and Circulation, regional transit service providers would experience increases in ridership due to future development consistent with the proposed action. This additional ridership would be related to trips between the housing units in the city and jobs and other destinations (e.g., shopping) outside of the city. These additional passengers would not result in substantial passenger delay to any one route as the riders would be spread among multiple lines, trains, and ferries, representing a small percentage increase from 2035 midpoint or 2050 environmental baseline conditions. Therefore, the proposed action would not substantially delay regional transit.

Based on the above, the proposed action would not impede the implementation of the Regional Transportation Plan, nor would it be inconsistent with its overarching goals and principles.

San Francisco Bay Water Quality Control Plan

San Francisco Bay waters are under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board, which established regulatory standards and objectives for water quality in San Francisco Bay in its basin plan. The basin plan identifies existing and potential beneficial uses for surface waters and provides numerical and narrative water quality objectives designed to protect those uses. The preparation and adoption of water quality control plans are required by the California Water Code (section 13240) and supported by the federal Clean Water Act. Changes in surface water standards must be approved by the U.S. EPA.

As discussed under “Hydrology and Water Quality” in Section 4.1, impacts of future development consistent with the housing element update related to implementation of a water quality control plan or sustainable groundwater management plan would be similar to the 2050 environmental baseline. Therefore, future development consistent with the housing element update would not conflict with or obstruct implementation of a water quality control plan. Impacts would be less than significant.

Based on the above, the proposed action would not impede the implementation of the water quality control plan, nor would it be inconsistent with its overarching goals and principles.

San Francisco Bicycle Plan

In August 2009, the board of supervisors approved the San Francisco Bicycle Plan. The bicycle plan includes a citywide bicycle transportation plan (comprised of a “Policy Framework” and a “Network Improvement” document) and implementation of specific bicycle improvements identified within the Plan. The bicycle plan includes objectives and identifies policy changes that would enhance the city’s bike-ability. It also describes the existing bicycle route network (a series of interconnected streets in which bicycling is encouraged), and identifies gaps within the citywide bicycle route network that require improvement.

The proposed action does not include any specific changes to the street network. However, as detailed in Section 4.4, Transportation and Circulation, future development consistent with the proposed action could include changes to the adjacent street network such as new or relocated driveways, reconstructed sidewalks, and various color curb changes on streets adjacent to the development sites to accommodate on-street commercial and passenger loading activities and to comply with Better Streets Plan requirements. Most future individual building projects consistent with the proposed action would include one or more transportation features to allow for vehicular and bicycle access that would change the transportation network. The streetscape and transportation features would promote accessibility for people walking and bicycling to and from the future development sites and would not interfere with circulation for people walking and bicycling in the area.

Based on the above, the proposed action would not impede the implementation of the bicycle plan, nor would it be inconsistent with its overarching goals and principles.

San Francisco Green Building Requirements

San Francisco adopted a green building code in 2008; in 2010, it adopted the California Green Building Standards Code (CALGreen) but with modifications. The current code is the 2019 San Francisco Green Building Code, which combines all mandatory elements from the 2019 CALGreen regulations as well as stricter local requirements. The purpose of the green building requirements is to promote the health, safety, and welfare of San Francisco residents, workers, and visitors by minimizing the use and waste of energy, water, and other resources in the

construction and operation of the buildings within the city and by providing a healthy indoor environment. The requirements are based on LEED®¹² or GreenPoints¹³ rating systems.

As discussed under “Greenhouse Gas Emissions” in Section 4.1, future development consistent with the housing element update would be required to comply with all applicable city and state green building measures, as required by CCR title 24, part 6, the state building code, and part 11, CALGreen, which would reduce the demand for energy resources by incorporating sustainability features that would promote energy efficiency and increase reliance on renewable energy sources. Furthermore, future development projects would be subject to the energy and water efficiency standards in effect at the time the projects are proposed; such standards are likely to become increasingly stringent over the coming years.

Based on the above, the proposed action would not impede the implementation of the green building code, nor would it be inconsistent with its overarching goals and principles.

San Francisco Transportation Plan

The San Francisco Transportation Plan is the long-range investment and policy blueprint for San Francisco’s transportation system development and investments. The plan analyzes every transportation mode, every transit operator, and all streets and freeways every four years. The outcomes of ConnectSF, discussed above, will be incorporated into the upcoming San Francisco Transportation Plan 2050, which is anticipated to be released in late 2022.¹⁴

As discussed in Section 4.4, Transportation and Circulation, vehicle congestion and associated congestion along corridors could result in significant delay to transit on Muni service, even if transit signal priority and transit-only lanes are present, such as along the Geary and the 19th Avenue corridors. The analysis identifies mitigation measures to reduce this impact including Mitigation Measures M-TR-4a: Parking Maximums and Transportation Demand Management, M-TR-4b: Driveway and Loading Operations Plans and Curb Cut Restrictions, and M-TR-4c: Implement Transit Travel Time Measures to Reduce Transit Delay. However, even with implementation of these measures, the transit delay impact would remain significant and unavoidable. For regional transit services providers, future development consistent with the proposed action would not result in a substantial transit delay.

As stated above, the outcomes of ConnectSF will be incorporated into the San Francisco Transportation Plan. The proposed action’s policies and transportation mitigation measures are consistent with those considered as part of ConnectSF; as such, the proposed action would not impede the implementation of the San Francisco Transportation Plan, nor would it be inconsistent with its overarching goals and principles.

¹² U.S. Green Building Council - LEED Rating Systems information website: <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222>, accessed March 21, 2022.

¹³ Build It Green - GreenPoint ratings information website: <http://www.builditgreen.org/greenpoint-rated/>, accessed March 21, 2022.

¹⁴ SFCTA, San Francisco Transportation Plan, <https://www.sfcta.org/projects/san-francisco-transportation-plan>, accessed March 21, 2022.

Transit First Policy

In 1973, the board of supervisors declared that public transit be given priority over other vehicles on San Francisco streets. In 1998, the San Francisco voters amended the City Charter (charter article 8A, section 8A.115) to include a transit first policy. The general plan incorporates the policy and the policy requires all city boards, commissions, and departments to implement principles that, among others, encourage the use of public rights-of-way by people walking, bicycling, and riding public transit above the use of the personal automobile.

As discussed in Section 4.4, Transportation and Circulation, as applicable, design features of future development consistent with the proposed action would need to comply with the Better Streets Plan and Vision Zero Policies, both of which focus on eliminating identified hazards and designing the transportation network to enhance safety for all ways of travel. Future development consistent with the proposed action would accommodate access for people walking, bicycling and driving or commercial vehicle/freight and passenger loading activities and would not include any design features that would cause potentially hazardous conditions. In addition, future development consistent with the proposed action would not generate types of activities that would interfere with people walking, bicycling or driving. Thus, the proposed action would not create potentially hazardous conditions for people walking, bicycling, or driving or public transit operations.

As discussed in Section 4.6, Air Quality, Transportation control measure TR10, Land Use Strategies, includes actions by the air district and partner agencies to promote infill development and land use patterns, policies, and infrastructure investments that support high-density, mixed-use residential development and employment to facilitate walking, bicycling, and transit use. These transportation control measures that are identified in the clean air plan are implemented by the general plan and the planning code, for example, through the city's transit first policy, transportation demand management program requirements, and transit impact development fees. Consistent with these policies, the proposed action would promote infill development and land use patterns, high-density and mixed-use residential development, and employment to facilitate walking, bicycling, and transit use.

Based on the above, the proposed action would not impede the implementation of the transit first policy, nor would it be inconsistent with its overarching goals and principles.

Vision Zero

In 2014, the board of supervisors adopted a resolution to implement an action plan to reduce traffic fatalities to zero by 2024 through engineering, education, and enforcement (resolution 91-14). Numerous San Francisco agencies responsible for the aforementioned aspects of the action plans adopted similar resolutions. In 2017, the board of supervisors amended the transportation and urban design elements of the general plan to implement Vision Zero (ordinance 175-17).

As discussed in Section 4.4, Transportation and Circulation, as applicable, design features of future development consistent with the proposed action would need to comply with the Vision Zero Policies,¹⁵ which focuses on eliminating identified hazards and designing the transportation network to enhance safety for all ways of travel. Changes to the transportation network as part of future development consistent with the proposed action to accommodate access for people walking, bicycling and driving or commercial vehicle/freight and passenger loading activities would not include any design features that would cause potentially hazardous conditions. In addition, future development consistent with the proposed action would not generate types of activities that would interfere with people walking, bicycling or driving. Thus, the proposed action would not create potentially hazardous conditions for people walking bicycling or driving or public transit operations.

Based on the above, the proposed action would not impede the implementation of Vision Zero, nor would it be inconsistent with its overarching goals and principles.

¹⁵ Vision Zero is a policy that assists in focusing traffic safety investments to reduce severe and fatal injuries to people walking, bicycling, and driving on streets where most severe or fatal injuries are concentrated. The city adopted Vision Zero as a policy in 2014, with the goal of zero traffic deaths for all ways people travel.

4. ENVIRONMENTAL SETTING AND IMPACTS

A. Introduction

This chapter evaluates the reasonably foreseeable environmental effects associated with adoption and implementation of the San Francisco Housing Element 2022 Update (housing element update or proposed action) described in Chapter 2, Project Description. Also included in this chapter is the regulatory framework applicable to the proposed action, the criteria used to determine the significance of potential impacts, the construction-related and operational impacts that may occur as a result of implementation of the proposed action, and mitigation measures that would reduce or avoid significant environmental impacts.

B. Scope and Organization of This Chapter

Impacts and mitigation measures are numbered consecutively within each topic and include an abbreviated reference to the impact section (e.g., AE = aesthetics).

The proposed action was found to have no impact or a less-than-significant impact with respect to the following environmental topics: land use and planning, aesthetics, population and housing, greenhouse gas emissions, recreation, public services, biological resources, geology and soils (except paleontology), hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agriculture and forestry resources, and wildfire. Therefore, these environmental topics are discussed in Section 4.1, Effects Found Not to Be Significant. The following symbols are used for individual environmental topics in Section 4.1:¹

LU	Land Use and Planning	BIO	Biological Resources
AE	Aesthetics	GE	Geology and Soils (except Paleontology)
PH	Population and Housing	HY	Hydrology and Water Quality
GHG	Greenhouse Gas Emissions	HAZ	Hazards and Hazardous Materials
RE	Recreation	EN	Energy
PS	Public Services		

¹ As discussed in Section 4.1, Effects Found Not to Be Significant, mineral resources, agriculture and forestry resources, and wildfire are not applicable to the proposed action. Thus, symbols are not used for these environmental topics in Section 4.1.

The proposed action was found to have impacts that are less than significant with mitigation, significant and unavoidable with mitigation, or significant and unavoidable for the following individual environmental topics; the following symbols are used for these topics in Section 4.2, Cultural Resources, through Section 4.10, Paleontological Resources:

CR	Cultural Resources	WI	Wind
TCR	Tribal Cultural Resources	SH	Shadow
TR	Transportation and Circulation	UT	Utilities and Service Systems
NO	Noise	GE	Paleontology
AQ	Air Quality		

The introduction to the environmental topics in this chapter describes the environmental conditions against which the effects of the proposed action are evaluated and clarifies the geographic scale, as shown in **Figure 2-2**, p. 2-4, in Chapter 2, Project Description.

Section 4.2, Cultural Resources, through Section 4.10, Paleontological Resources, contain the following elements:

- *Environmental Setting.* The Environmental Setting section for each environmental topic describes a projected future conditions (2050 environmental baseline) and not an existing conditions baseline. For some environmental topics (e.g., transportation, air quality, and noise), 2020 or 2021 or 2022 conditions are described to provide the reader context to assist in understanding the 2050 environmental baseline.
- *Regulatory Framework.* The Regulatory Framework section for each environmental topic provides an overview of existing laws and regulations applicable to each specific environmental topic. The section provides an overview of applicable existing laws and regulations and is not intended to be a comprehensive list of all the regulations that pertain to each environmental topic.
- *Environmental Impacts.* The Environmental Impacts section for each environmental topic presents a discussion of the impacts (i.e., changes to the physical environment compared to the 2050 environmental baseline) that could result from future development consistent with the proposed action. Where applicable, both construction-related and operational impacts are analyzed, along with cumulative impacts. The section begins with the significance criteria, which establish the metrics by which the significance of environmental impacts is determined. Then the section identifies the impacts that would result from the proposed action as well as mitigation measures, if required. Impacts of the proposed action are organized into separate categories, based on the criteria listed in each topic section.
- *Cumulative Impacts.* The Cumulative Impacts section for each environmental topic considers the incremental effects of future actions consistent with the proposed action together with the environmental effects of cumulative projects. The analysis of cumulative impacts under each environmental topic is based on the same setting, regulatory framework, and significance criteria as the analysis for the proposed action. Additional mitigation measures are identified if the analysis determines that the proposed action would result in a cumulatively considerable contribution to a significant adverse cumulative impact.

C. Classification of Impacts

Impacts are categorized by type of impact, as follows:

- *No Impact (NI)*. No adverse changes (or impacts) on the environment are expected.
- *Less than Significant (LTS)*. An impact that would not involve an adverse physical change to the environment, would not exceed the defined significance criteria, or would be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations.
- *Less than Significant with Mitigation (LTSM)*. An impact that is reduced to a less-than-significant level through implementation of the identified mitigation measures.
- *Significant and Unavoidable with Mitigation (SUM)*. An adverse physical environmental impact that exceeds the defined significance criteria but can be reduced through compliance with existing local, state, and federal laws and regulations and/or implementation of all feasible mitigation measures but cannot be reduced to a less-than-significant level.
- *Significant and Unavoidable (SU)*. An adverse physical environmental impact that exceeds the defined significance criteria and cannot be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations and for which there are no feasible mitigation measures.

D. Mitigation Measures

CEQA Guidelines section 15126.4 directs preparers of an EIR to identify feasible measures that could minimize significant adverse impacts. Mitigation measures are developed to avoid, minimize, rectify, reduce, or eliminate an impact or compensate for an impact resulting from project implementation. CEQA Guidelines section 15041 grants authority to the lead agency to require feasible changes in any or all activities involved in a project to lessen substantially or avoid significant effects on the environment. Feasible mitigation measures have been included in this chapter for specific environmental impacts, where applicable.

E. Analysis Assumptions

The primary objective of the housing element update is to promote the development of more housing through 2050 than is anticipated under existing 2014 housing element policies while also advancing racial and social equity. The overarching goal of the housing element update is to produce an average of approximately 5,000 housing units per year through 2050. To meet the equity objectives, the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas (see **Figure 2-1**, p. 2-2, in Chapter 2, Project Description) along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. However, the adoption of the housing element update would not in and of itself legislate any changes in zoning or other land use regulations, or approve any development projects.

As such, the housing element update would not result in any direct physical changes to the environment. Instead, the housing element update would result in reasonably foreseeable indirect changes. Specifically, the department assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and modify density controls in low-density areas that are primarily located on the north and west sides of the city, designation of housing sustainability districts, and approval of development projects consistent with the goals, policies, and actions of the housing element update. Therefore, this EIR identifies the reasonably foreseeable impacts of future actions that would implement the proposed goals, policies, and actions, including rezoning actions that would enable increased housing density.

Modeling and Projections

As discussed in the Housing Element 2022 Update Modeling and Projections Memorandum included in Appendix C of this EIR, the department projected future housing production and distribution under the 2050 environmental baseline, the proposed action, and the alternatives.

MAPPING HOUSING GROWTH

This EIR includes figures that illustrate the differences in the anticipated housing production levels and distributions between the 2050 environmental baseline and the proposed action, as shown in **Figure 2-11**, p. 2-32, in Chapter 2, Project Description. The level and distribution of housing growth assumed under the 2050 environmental baseline and proposed action represent possible outcomes based on the modelling conducted by the department. These projected housing production levels and distributions informed the programmatic environmental impact analysis presented in this EIR. While the impact analysis in the EIR is based on these projected future conditions, the depictions are not intended to be precise maps of where future development would occur. Future housing development could occur in any areas of the city where zoning allows. Rather, the depictions are used to identify the types and magnitude of impacts anticipated from the increased density and redistribution of housing growth anticipated under the proposed action compared to the 2050 environmental baseline.

JOBS

As described in Chapter 2, Project Description, the housing element update focuses on housing production and distribution and does not include policies or actions that would substantially change the number or location of jobs in the city relative to the 2050 environmental baseline. This EIR assumes that the number and distribution of jobs in the city would be essentially the same in 2050 under the existing 2014 housing element and the proposed action.

Approach to the Analysis

The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element policies as the baseline against which environmental impacts of the housing element update are assessed, not existing (i.e., 2020, 2021, or 2022) conditions. The department projects that under the existing housing element policies approximately 102,000 housing units would be constructed by 2050 (2050

environmental baseline). Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared to the 2050 environmental baseline. See “Environmental Baseline,” below, for more details on baseline and estimates of housing units.

To meet the equity objectives, the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city, as shown in **Figure 2-11**, p. 2-32, in Chapter 2, Project Description. This figure presents one possible distribution of future housing development growth that could occur and informs the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.

The housing element update would modify the policies of the general plan’s housing element. However, the adoption of the housing element update would not in and of itself legislate any changes in zoning or other land use regulations or approve any development projects. As such, the housing element update would not result in any *direct* physical changes to the environment. In accordance with CEQA Guidelines section 15064(d), the EIR identifies the reasonably foreseeable indirect environmental impacts that could occur as a result of future actions that would implement the proposed action and development projects that would be consistent with it. As previously stated, when this EIR uses the phrase “impacts of the proposed action,” it refers to the reasonably foreseeable indirect impacts that would result from those future implementation actions and development projects compared with the development anticipated to occur under the existing 2014 housing element by 2050.

The EIR identifies the impacts from the construction and operation of an additional 50,000 housing units by 2050 at a programmatic level, in accordance with CEQA Guidelines section 15168. Programmatic analysis is appropriate for a project that will involve a series of actions that are (1) related geographically, (2) logical parts in a chain of contemplated actions, (3) connected as part of a continuing program, and (4) carried out under the same authorizing statute or regulatory authority and have similar environmental impacts that can be mitigated in similar ways. To the extent that any future changes to land use controls could result in significant adverse effects on the physical environment that were not anticipated in the housing element update EIR, those changes would require further environmental review.

CEQA Guidelines section 15168(c) states that subsequent activities in the program must be examined in light of the program EIR to determine whether an additional environmental document must be prepared. Thus, this EIR assumes that future development consistent with the housing element update would be subject to further environmental review at the time they are proposed. The analysis of future projects would be based on existing conditions at the site and vicinity, at such time a project is proposed, and would consider updated information relevant to the environmental analysis of the future projects (e.g., changes to the environmental setting or updated growth forecasts, models, etc.).

As discussed under “Housing Sustainability Districts” in Chapter 2, Project Description, one foreseeable future outcome of the housing element update could be the designation of one or more of the areas identified in **Figure**

2-8, p. 2-27, in Chapter 2, as a housing sustainability district that could be used to streamline environmental review and approval of residential development projects. No specific housing sustainability districts are proposed at this time as part of the housing element update, but the EIR identifies where such districts may be considered in the future. Designation of any future housing sustainability districts would require adoption of an ordinance by the board of supervisors amending the planning and business and tax regulations code. In addition, future designation of any housing sustainability districts would be subject to environmental review in accordance with CEQA. This EIR may be used to inform and streamline the environmental review for the adoption of future housing sustainability districts that would implement the goals, policies, and actions of the housing element update.

Geographical Scale of Analysis for Each Environmental Resource

The evaluation of impacts for each environmental topic considers the geographical scale to best analyze the particular environmental topic. The EIR evaluates environmental effects at different geographical scales, from the transportation analysis zone to neighborhood, planning district, city, and regional levels. For example, the transportation analysis is based primarily on transportation analysis zones, built-environment historic resources analysis is based on neighborhoods, water supply is evaluated for the city as a whole, and regional air pollution is evaluated for the San Francisco Bay Area.

Environmental Baseline

Analysis in CEQA documents typically identifies impacts by comparing conditions with the proposed project to existing conditions. However, this EIR assumes that if the housing element update is not adopted, housing development would continue to occur under the policies and measures of the existing 2014 housing element. In addition, impacts from the housing element update would not take hold immediately; impacts would manifest over years and decades as new housing is constructed consistent with the housing element or consistent with planning code amendments adopted in response to the housing element update. As such, the environmental impact analysis in the EIR uses projected future (2050) conditions under the existing 2014 housing element, not existing conditions, as the baseline against which the significance of environmental impacts of the housing element update are assessed. Comparing and assessing impacts of the housing element update with current/existing conditions would mislead the public and decision makers into believing that (1) there would be no or few changes to existing conditions from continued development under the existing 2014 housing element; and (2) that all impacts from future (2050) development are the result of the housing element update, rather than development that could occur under the existing 2014 housing element. Those conclusions would be incorrect and would substantially overestimate the impacts caused by the housing element update. Thus, because the housing element update is a long-term plan with no direct impacts, use of an existing, current conditions or 2020 baseline would be misleading to the public and decision makers. Instead, use of a future 2050 baseline will better inform decision makers as to the impacts of adopting the housing element update rather than continuing with the status quo.

However, for an analysis of the impacts of the existing 2014 housing element compared against 2020 conditions, see the “No Project Alternative” in Chapter 6, Alternatives.) As discussed under “2050 Projected Growth Under

the Existing 2014 Housing Element” in Chapter 2, Project Description, under 2020 conditions, there are approximately 407,000 housing units and 771,000 jobs in the city. Under the existing 2014 housing element, the department estimates that there would be approximately 509,000 housing units and 882,000 jobs in the city by 2050, an increase of 102,000 housing units and 111,000 jobs compared to 2020 conditions. Anticipated growth under the existing 2014 housing element would continue to primarily occur on the east side of the city and outside of well-resourced areas. Therefore, the analysis of environmental impacts in this EIR is based on a comparison of growth under the 2014 housing element to growth under the housing element update.

Two new state housing laws were signed by the governor in September 2021, after the department issued the notice of preparation for this EIR: the California Housing Opportunity and More Efficiency (HOME) Act (amending Government Code section 66452.6 and adding sections 65852.21 and 66411.7) and Government Code 65913.5. These laws seek to increase the state’s housing supply by enabling the development of multi-family buildings in areas zoned for single-family housing (see “Population and Housing” in Section 4.1, Effects Found Not to Be Significant, for further discussion of these laws). In general, the California HOME Act and Government Code 65913.5 serve to increase the development potential in existing single-family neighborhoods. By enabling multi-family development in single-family zones, these laws may largely achieve the proposed objective of the housing element update to increase housing supply by allowing multi-family development in single-family zones. Given the effective date of these laws, they were not considered in the growth projections developed for this EIR. Now considering the passage of these laws, this EIR likely represents a conservative environmental analysis because it likely overestimates the difference in growth anticipated under the 2050 environmental baseline compared to the proposed action.

The projected future conditions baselines are discussed below.

2035 Midpoint Analysis

For transportation (transit delay and vehicle miles traveled), air quality, and noise impacts, the EIR provides a midpoint (2035) analysis of anticipated physical environmental effects. The 2035 midpoint analysis is only conducted for these topics because there is a potential for impacts to be worse in 2035 compared to 2050 due to planned transportation improvements and increasingly stringent emissions standards that would occur after 2035. The 2035 midpoint conditions analysis provides city decision makers an additional point to inform decision making, such as when and where to prioritize future transportation and other infrastructure facilities and improvements. This midpoint analysis also serves as a point of comparison to show how the potential impacts of the proposed action differ between 2035 and 2050.

For purposes of the EIR, the department projects that the city would add approximately 56,000 new housing units and 78,000 jobs under the existing 2014 housing element by 2035 (i.e., the 2035 midpoint conditions, or baseline for the 2035 midpoint analysis). The number of housing units constructed per year between 2001 and 2020 is shown in **Table 2-2**, p. 2-16, in Chapter 2, Project Description.

Future Development Consistent with the Housing Element 2022 Update

To inform the programmatic impact analyses and mitigation recommendations for transportation, air quality, and noise impacts, the department identified and quantitatively evaluated a range of building types that would be consistent with the housing element update, some of which were based on previously analyzed projects in the city. The building types include residential or mixed-use residential buildings at the following heights with the number of housing units in parentheses: 590 feet (984 housing units), 240 feet (495 housing units), 120 feet (200 housing units), 85 feet (50 housing units), 65 feet (29 housing units), and 40 feet (30 housing units). Additionally, construction of accessory dwelling units (ADUs) was analyzed. The quantitative evaluation was based on construction phases, durations, and equipment required to construct the range of building types. Appendices G, H, and I of this EIR provide additional information on the types of buildings that were analyzed.

F. Cumulative Impacts

Defining Cumulative Impacts

CEQA requires an evaluation of a proposed project's potential contributions to cumulative impacts, in addition to proposed project-specific impacts. CEQA Guidelines section 15130(a)(1) states that a "cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." Other proposed projects include reasonably foreseeable future projects.

Guidance for cumulative impact analysis is provided in CEQA Guidelines sections 15130:

- An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a)(3).² Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.
- An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.
- When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR.
- A project's contribution is less than cumulatively considerable and therefore not significant if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

² *Cumulatively considerable* means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

- The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone.
- The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

Accordingly, the first step in cumulative impact analysis under CEQA is to determine whether impacts of a proposed project would combine with similar impacts of other projects. If such combined impacts are identified, the next step in the analysis is to determine whether these combined or cumulative impacts would be significant in accordance with the applicable significance criteria or thresholds. For cumulative impacts that are determined to be significant, the analysis must then determine whether an individual project's contribution to the cumulative impact is considerable.

The cumulative impact analysis for individual resource topics is described in each resource section of the EIR, immediately following the description of the project-specific impacts and mitigation measures.

Approach to Cumulative Impacts

CEQA Guidelines section 15130(b)(1) states that the approach to the cumulative impact analysis may be based on either a list of past, present, and probable future projects producing related or cumulative impacts or a summary of projections contained in an adopted general plan or related planning document that describes or evaluates conditions that contribute to the cumulative effect.

Because the projections for the housing element update include all anticipated housing and employment growth in the city through 2050, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. While the project-level impact analysis identifies the impacts that would result from the construction and operation of approximately 50,000 housing units by 2050 (i.e., the difference between growth anticipated under the 2050 environmental baseline and the additional housing growth projected under the proposed action), the cumulative impact analysis in this EIR considers the impacts that would result from the addition of approximately 150,000 housing units and 111,000 jobs in the city through 2050 compared to 2020 conditions. Thus, the cumulative impact analysis identifies the impacts that would result from the housing and job growth that would occur in the city through 2050 without the proposed action in combination with the additional growth anticipated with the proposed action. The analysis is based primarily on modeled projections, including housing and employment growth projections³ and transportation (travel demand and mode) projections.⁴

In addition, the following projects were not included in projections for either the 2050 environmental baseline or the proposed action: the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's (BART's)

³ See the Housing Element 2022 Update Modeling and Projections Memorandum in Appendix C of this EIR.

⁴ Travel demand methodology and VMT results are presented in the *San Francisco Housing Element Update 2022: Transportation Model Results, Final Technical Memorandum*, February, 2022. (See Appendix G.3 of this EIR).

Second Transbay Tube Project (included in Link21, which is a program of system improvements for BART and regional rail operations), San Francisco County Transportation Authority's Downtown Congestion Pricing, and Increased Caltrain Service and Pennsylvania Avenue Extension as described in **Table 4.0-1** and shown in **Figure 4.0-1** (p. 4-12). Thus, the anticipated impacts associated with the Waterfront Plan Update and the transportation projects listed in **Table 4.0-1** that could combine to result in a significant cumulative impact are addressed in the applicable topic areas as part of the "list" approach per CEQA Guidelines section 15130(b)(1).

Lastly, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions, and anticipated to continue through 2050, although they are not considered in the projections. The routine infrastructure repair, maintenance, and improvement projects include Pacific Gas and Electric Company (PG&E's) Power Asset Acquisition Project (case number 2019-017272ENV), which is the San Francisco's purchase of PG&E's distribution assets and substantially all of PG&E's transmission assets that are needed for the city to provide reliable electricity service to customers within San Francisco. Thus, this cumulative analysis also considers future infrastructure repair, maintenance, and improvement projects. Oftentimes, routine infrastructure repair, maintenance, and improvement projects are small. All construction contracts for these types of projects include San Francisco Public Works' (public works) or San Francisco Public Utilities Commission's standard construction measures for the purposes of protecting human health and safety as well as environmental resources. The standard construction measures that apply to routine infrastructure repair, maintenance, and improvement projects are related to the following: geotechnical considerations, air quality, water quality, traffic, noise, hazardous materials, bird protection, tree conservation, environmentally sensitive areas, construction staging, and archaeological and paleontological discoveries. In addition to these standard construction measures, the routine infrastructure repair, maintenance, and improvement projects would also be subject to all applicable federal, state, and local regulations.

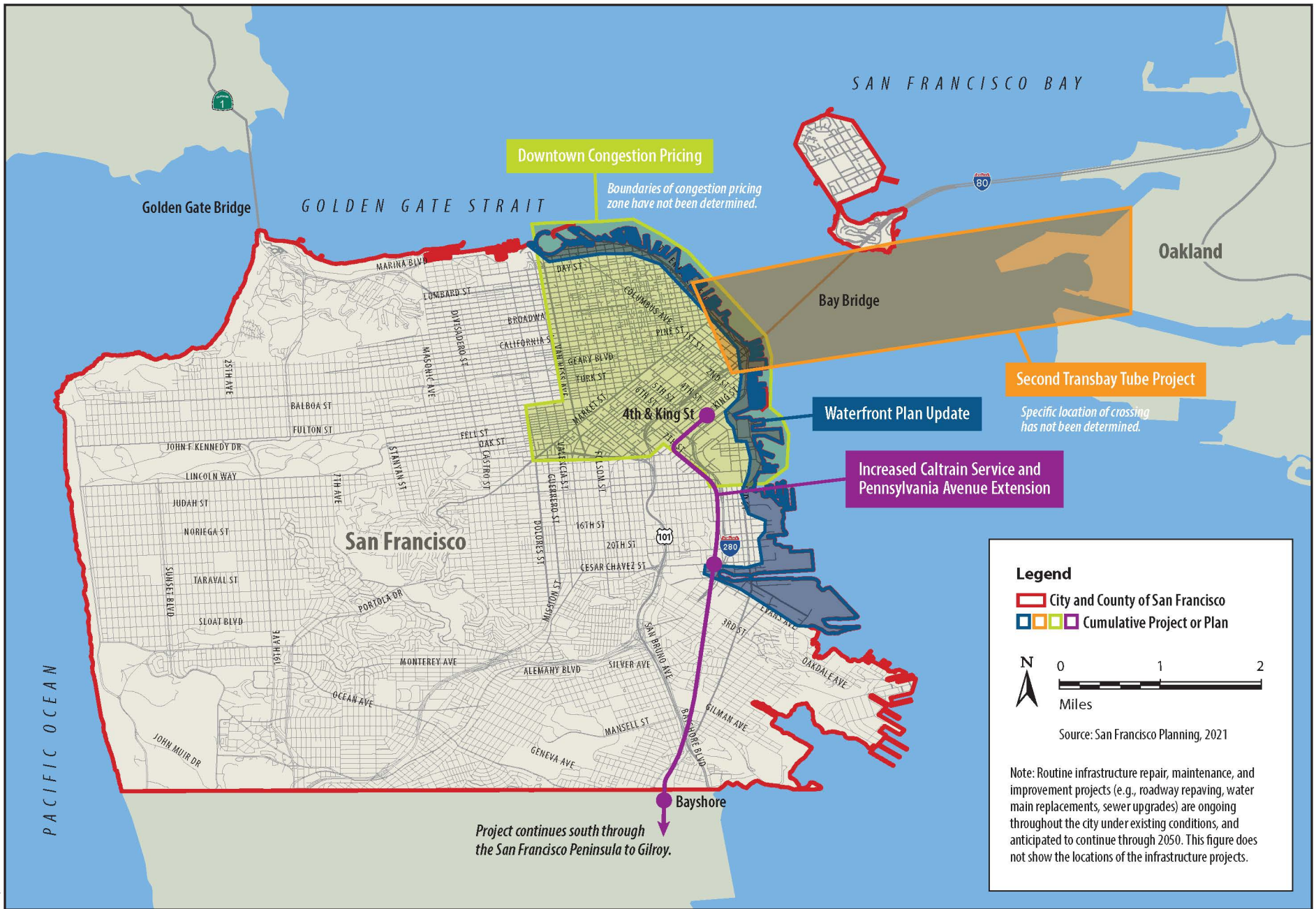
In summary, the cumulative impact analysis presented in this EIR considers the impacts that would result from the addition of approximately 150,000 housing units and 111,000 jobs in the city through 2050 compared to 2020 conditions in combination with the cumulative projects identified above.

Table 4.0-1: Cumulative Projects

Project	Description
Waterfront Plan Update Case No. 2019-023037ENV	<p>The Port of San Francisco's (port's) proposed 2019 Waterfront Plan Update would update and amend the 1997 Waterfront Land Use Plan, which sets long-term goals and policies to guide the use, management, and improvement of 7.5 miles of properties under the port's jurisdiction, from Fisherman's Wharf to India Basin.</p> <p>The 2019 plan provides a long-range policy framework to guide future port improvement projects, programs, and stewardship initiatives. The nine goals and polices proposed by the plan include, but are not limited to, preserving and enhancing the waterfront's function as a maritime port, hosting a diversity of activities and people, enhancing public access and open space along the waterfront, designing quality new development and preserving the waterfront's historic character, strengthening the port's resilience to climate change impacts, and cultivating an environmentally sustainable port to limit the impacts of climate change. The 2019 plan would focus on changes in land use and redevelopment and would not result in a substantial amount of residential development. The department published the Waterfront Plan Project Draft Environmental Impact Report on February 23, 2022.</p>
Second Transbay Tube Project (included in Link21)	<p>Link21 is a program of system improvements for Bay Area Rapid Transit (BART) and regional rail operations. Link21's program would include a second transbay tube crossing between Oakland and San Francisco that would increase BART's transbay capacity and connect regional rail services across San Francisco Bay. Additional improvements throughout the region would be included in Link21 to address issues that affect system performance and the passenger experience, such as travel time, reliability, and capacity in high-demand corridors. The Second Transbay Tube Project, which is the cumulative project relevant to the analysis and is one part of Link21's program of improvements, is currently being studied.</p>
Downtown Congestion Pricing	<p>The San Francisco County Transportation Authority is studying downtown congestion pricing which would include charging a toll to drive into the congestion pricing zone in northeast San Francisco and investing revenues to increase transit service and improve bicycle, pedestrian, and transit infrastructure. The project is currently being studied and has not undergone environmental review.</p>
Increased Caltrain Service and Pennsylvania Avenue Extension	<p>Under Caltrain's 2040 Service Vision, Caltrain service during peak hours would grow to a minimum of eight trains per direction per hour which is two trains per hour per direction higher than assumed in the 2050 environmental baseline. The vision would also include all-day express service every 15 minutes as well as increased off-peak and weekend services as compared to the 2050 environmental baseline. The Peninsula Corridor Joint Powers Board adopted the vision on October 3, 2019.</p> <p>The Pennsylvania Avenue extension would put Caltrain (and High-Speed Rail) under Pennsylvania Avenue from the future Fourth and Townsend station to just north of 22nd Street. The extension project is currently being designed and has not undergone environmental review.</p>

Note: The list of cumulative projects was prepared at the time of publication of the notice of preparation for the EIR (June 16, 2021).

Source: San Francisco Planning Department, 2021; San Francisco County Transportation Authority, *Downtown Congestion Pricing*, <https://www.sfcta.org/downtown>, accessed: August 15, 2021; Caltrain, *Caltrain Board Signs Off on Business Plan Service Vision*, 2021, https://www.caltrain.com/about/MediaRelations/news/Caltrain_Board_Signs_Off_on_Business_Plan_Service_Vision.html?PageMode=Print, accessed: August 15, 2021.



4.1 Effects Found Not to Be Significant

Introduction

In the course of evaluating the potential impacts of the proposed action on the environment with respect to the topics included in CEQA Guidelines Appendix G checklist, the proposed action was found to have no impact or a less-than-significant impact with respect to the following environmental topics: land use and planning, aesthetics, population and housing, greenhouse gas emissions, recreation, public services, biological resources, geology and soils (except paleontology), hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agriculture and forestry resources, and wildfire. Therefore, these environmental topics are discussed in this section rather than in standalone sections of this EIR (e.g., Section 4.2, Cultural Resources; Section 4.3, Tribal Cultural Resources; Section 4.4, Transportation and Circulation; etc.). Although there would be significant impacts related to the construction of new or expanded recreation and public services facilities, these topics are included in this section because these impacts would be reduced to less than significant through implementation of the same or similar mitigation measures identified in other sections of this EIR, including Section 4.2, Cultural Resources; Section 4.3, Tribal Cultural Resources; Section 4.5, Noise and Vibration, and Section 4.6, Air Quality. This section describes the basis for the city's determination with regard to each of these topics, pursuant to section 15128 of the CEQA Guidelines.

Land Use and Planning

ENVIRONMENTAL SETTING

Project Location

San Francisco is on the tip of the San Francisco Peninsula, with San Francisco Bay to the east, San Mateo County to the south, the Pacific Ocean to the west, and the Golden Gate Strait to the north. The city is made up of many distinct planning districts and planning areas, each with a wide range of characteristics, including, but not limited to, industrial, mixed-use, residential, and commercial uses. Residential uses throughout the city range from low-density, single-family homes, residential housing in mixed-use neighborhoods with commercial and industrial uses, to high-density, multi-unit complexes. As described in Chapter 2, Project Description, although the city is densely developed, underutilized properties with redevelopment potential and some vacant parcels exist throughout the city.

Existing Land Uses, Zoning, and Height and Bulk Districts¹

The city is largely developed with a mix of uses, including residential, neighborhood retail, institutional and cultural, commercial, industrial, public, and open space uses. **Table 4.1-1**, provides the total acreage and percentage of the city's total area for each of the generalized zoning designations, including residential and mixed use. **Figure 2-4**, p. 2-14, in Chapter 2, Project Description, shows a generalized citywide zoning map under 2020

¹ For this topic, *existing conditions* is defined as the conditions in 2022, the year for which the most recent applicable data are available.

conditions. As shown, most areas in the city allow residential uses; the eastern portion of the city also consists of commercial, mixed-use, and industrial uses.

Table 4.1-1: Generalized Citywide Zoning Designations

Zoning Designation	Total Acres	Percentage of City’s Total Area
Commercial	956	3.2
Industrial	1,880	6.2
Mixed Use	3,611	12.0
Public	8,491	28.2
Residential	15,191	50.4
Total	30,129	100.0

Source: DataSF, *Zoning Map—Zoning Districts*, City and County of San Francisco, 2020, *sfgov.org*, accessed October 26, 2020.

The city contains height and bulk districts that range in height from 40 to more than 370 feet; however, planning code section 261 limits heights in single-family districts to 35 feet, with minor exceptions. Planning Code section 263, Height Limits: Special Exceptions, provides exceptions to the height limits in certain areas of the city.

Figure 2-5, p. 2-15, in Chapter 2, Project Description, shows generalized citywide height districts permitted under 2020 conditions. As shown, the tallest height districts occur in the Downtown/Civic Center, Financial District, and South of Market planning districts.

There are 12 residential zoning districts in the city that allow a mix of land uses. A summary of planning code provisions for residential uses is provided on the department’s website.² The *Summary of the Planning Code Standards for Residential Districts* provides the name of the zoning district and identifies the land use controls. Residential zoning designations in the city include:

- Residential—House (RH-1[D], RH-1, RH-2, and RH-3)
- Residential—Mixed, Apartments and Houses (RM-1, RM-2, RM-3, and RM-4)
- Residential—Commercial Combined (RC-3 and RC-4)
- Residential Enclave District (RED)
- Residential Transit-Oriented Development (RTO)

The city includes many mixed-use districts, which also allow residential uses. Generally, the area with the highest housing density in the city is the downtown area, which has an average density of 218 dwelling units per acre.

² San Francisco Planning Department, *Summary of the Planning Code Standards for Residential Districts*, <https://sf-planning.org/sites/default/files/FileCenter/Documents/5358-Residential%20Standards%20Summary%20Table.pdf>, accessed August 9, 2021.

Lower densities (as low as 14 dwelling units per acre) are found in the middle, western, and southern areas of the city.³

Planning Districts

As illustrated in **Figure 2-2**, p. 2-4 in Chapter 2, Project Description, the department divides the city into planning districts and neighborhoods. Brief descriptions of the zoned height limits (based on **Figure 2-5**, p. 2-15, in Chapter 2), as well as existing land uses and building heights, are provided below for each planning district.⁴ The neighborhoods within each planning district are also listed below.

Bernal Heights Planning District

The Bernal Heights planning district, in the southeast portion of the city, is bounded by the Mission planning district to the north, the South Bayshore planning district to the east, the South Central planning district to the south, and the Central planning district to the west. The district is primarily zoned for residential uses (RH-1, RH-2, and RH-3) and consists primarily of low-density single-family and multi-family residential uses with neighborhood commercial zoning and smaller retail uses along main corridors, such as Mission Street (Mission Bernal Neighborhood Commercial District) and Cortland Avenue (Cortland Avenue Neighborhood Commercial District). Existing height control throughout the planning district is primarily 40-X. Commercial corridors on Mission Street are zoned 50-X, with an area near the CPMC Hospital Mission Bernal Campus zoned 105-E. Most of the existing development in the Bernal Heights planning district consists of two- to three-story buildings (approximately 20 to 30 feet in height) with some taller multi-family residential buildings, generally up to five stories (approximately 50 feet in height). Buildings along the commercial corridors on Cortland Avenue and Mission Street are generally one- to three-story buildings (approximately 15 to 30 feet in height), with a few taller buildings up to four stories (approximately 40 feet). In addition, the planning district includes public recreational land, such as Bernal Heights Park and Holly Park. The Bernal Heights planning district contains the entirety of the Bernal Heights neighborhood.

Buena Vista Planning District

The Buena Vista planning district, in the central portion of the city, is surrounded by the Western Addition planning district to the north, the Mission planning district to the east, the Central planning district to the south, and Golden Gate Park and the Inner Sunset planning district to the west. It consists primarily of low-density residential land uses (RH-2, RH-3, RM-1, RM-2, and RTO), with neighborhood commercial uses along Haight Street, (Haight Street Neighborhood Commercial District and Lower Haight Street Neighborhood Commercial District), Market Street (Upper Market Neighborhood Commercial Transit District), Cole Street (Cole Valley Neighborhood Commercial District), Divisadero (Divisadero Street Neighborhood Commercial Transit District), and Castro Street. Existing height control throughout the planning district is primarily 40-X, except for a few areas near Buena Vista Park which are zoned 80-E and 50-X. Commercial corridors on Market Street and Van Ness

³ San Francisco Planning Department, *Summary of the Planning Code Standards for Residential Districts*, <https://sf-planning.org/sites/default/files/FileCenter/Documents/5358-Residential%20Standards%20Summary%20Table.pdf>, accessed August 9, 2021.

⁴ The planning districts are listed in alphabetical order.

Avenue are zoned 50-X, 85-X, and 65-B. Most of the existing development in the Buena Vista planning district consists of three- to four-story buildings (approximately 30 to 40 feet in height) with some taller multi-family residential buildings that are generally between four- to six-stories (approximately 40 to 60 feet in height). Buildings along the commercial corridors on Haight and Divisadero streets generally range from two to four stories (approximately 20 to 40 feet in height), with a few taller buildings up to eight stories (approximately 80 feet in height) in the eastern portion of the planning district. In addition, public recreational land, such as Buena Vista Park, Corona Heights Park, and Alamo Square Park, is also located within the planning district. The Buena Vista planning district includes the entirety of the Haight Ashbury neighborhood, and portions of the Hayes Valley and Castro/Upper Market neighborhoods.

Central Planning District

The Central planning district, in the central portion of the city, is surrounded by the Buena Vista planning district to the north, the Mission and Bernal Heights planning districts to the east, the Ingleside planning district to the south, and the Inner Sunset planning district to the west. It consists of a mix of low-density residential land uses (RH-1, RH-2, RH-3, RM-1, and RM-2) with neighborhood commercial uses along main corridors, such as Market Street, (Upper Market Neighborhood Commercial Transit District), Castro Street (Castro Street Neighborhood Commercial District), 14th and 24th streets (24th Street Noe Valley Neighborhood Commercial District) and Church Street. Existing height control throughout the planning district is primarily 40-X, except for commercial corridors on Market Street zoned 65-B and 80-X. Most of the existing development in the Central planning district consists of two- to four-story buildings (approximately 20 to 40 feet in height). Buildings along the commercial corridors on Castro, 24th, and Market streets generally range from two to four stories (approximately 20 to 40 feet in height), with a small number of taller buildings of five to eight stories (approximately 50 to 85 feet in height). The planning district also contains public recreational land, such as Glen Canyon Park and Billy Goat Hill. The Central planning district includes the entirety of the Noe Valley and Glen Park neighborhoods and portions of the Twin Peaks, Inner Sunset, and Castro/Upper Market neighborhoods.

Downtown Planning District

The Downtown planning district, in the northeastern portion of the city, is bounded by the Northeast planning district to the north, the San Francisco Bay and South of Market planning district to the east, the Mission and South of Market planning districts to the south, and the Western Addition planning district to the west. It consists of a mix of high-density land use types, including public uses, commercial districts, residential transit-oriented districts, residential-commercial combined districts, and downtown residential districts (C-3-O, C-3-R, C-3-G, and RC-4). Market Street is the primary commercial corridor in this planning district; however, most streets contain a mix of uses. Portions of the planning district are zoned 80-X and 80-T-130-T/F, with increasing height and bulk controls adjacent to Market Street towards The Embarcadero. Existing height control near The Embarcadero, includes, but is not limited to, 1000-S-2, 400-S, 265-E, and 500-I. The height of existing development in the Downtown planning district varies widely. Most of the existing development in the Downtown planning district ranges from four to forty stories (approximately 40 to 400 feet in height). Taller buildings are concentrated in the Financial District both north and south of Market Street. To the west of the Financial District and Yerba Buena areas, buildings tend to be more mid-rise in height (up to 85 to 120 feet) in the Union Square, Mid-Market,

Tenderloin, and Civic Center areas, with a limited distribution of taller buildings, except near the intersection of Market Street and Van Ness Avenue. The Downtown planning district contains the tallest building in the city, Salesforce Tower, which is approximately 1,100 feet in height. The Downtown planning district includes the entirety of the Tenderloin neighborhood and portions of the Nob Hill, Financial District/South Beach, Civic Center, and South of Market neighborhoods. The Downtown planning district also includes prominent features of the city, such as the San Francisco City Hall, Civic Center Plaza, and Yerba Buena Gardens.

Golden Gate Park Planning District

The Golden Gate Park planning district, in the northwestern portion of the city, is surrounded by the Richmond planning district to the north, the Western Addition and Buena Vista planning districts to the east, the Inner Sunset and Outer Sunset planning districts to the south, and the Pacific Ocean to the west. Golden Gate Park comprises approximately 1,017 acres of public recreational land and recreational facilities.⁵ The Golden Gate Park planning district contains the entirety of the Golden Gate Park neighborhood.

Ingleside Planning District

The Ingleside planning district, in the southwest portion of the city, is bordered by the Inner Sunset, Outer Sunset, and Central planning districts to the north; the South Central planning district to the east; the San Francisco/San Mateo county line to the south; and the Pacific Ocean to the west. It consists primarily of low-density residential land uses (RM-1, RH-1, RH-1(D), and RH-2), with neighborhood commercial uses along main corridors, such as Ocean Avenue (Ocean Avenue Neighborhood Commercial Transit District and Lakeside Village Neighborhood Commercial District). Existing height control throughout the planning district is primarily 40-X. Most of the existing development in the Ingleside planning district are two-story buildings (approximately 20 to 30 feet in height) with some taller multi-family residential buildings that are generally up to four stories (approximately 40 feet in height). Buildings along the commercial corridor on Ocean Avenue generally range from two to three stories (approximately 20 to 35 feet in height), with a few taller buildings generally up to five stories (approximately 55 feet in height). The San Francisco State University campus in the center portion of the planning district includes buildings generally up to six stories (approximately 65 feet in height). The Ingleside planning district also includes prominent features of the city, including Fort Funston and Lake Merced. The Ingleside planning district includes the entirety of the Lakeshore and Oceanview/Merced/Ingleside neighborhoods and portions of the West of Twin Peaks and Sunset/Parkside neighborhoods.

One of the seven major approved projects in the city's pipeline, the Parkmerced project, is located in the Ingleside planning district. (The city's pipeline projects are discussed under "Pipeline Projects" in Chapter 2, Project Description.) The existing Parkmerced site currently includes over 3,000 housing units in a combination of 14-story towers and two-story (approximately 20 feet in height) townhouses. The Parkmerced project, approved in 2011, comprises a master redevelopment program for the 152-acre Parkmerced site and includes retention of existing 14-story (approximately 140-foot) midrise buildings, demolition and replacement of the existing 2-story townhouse buildings with new mid-rise (generally 4 to 8-story) and high-rise (14-story)

⁵ San Francisco Recreation & Parks, *Discover Golden Gate Park*, 2021, <https://sfrecpark.org/770/Golden-Gate-Park>, accessed November 2, 2021.

residential buildings, construction of underground parking beneath each block, and concurrent infrastructure improvements, such as re-routing the M-Line light rail through the development and providing five major intersection improvements. Upon project buildout, with its 15- to 30-year phased construction horizon, the development will include approximately 5,700 net new housing units, 230,000 gross square feet of new retail uses, 80,600 gross square feet of additional office uses, and 7,000 net new off-street parking spaces.

Another of the seven major approved projects in the city's pipeline, the Balboa Reservoir Development project, is located in the Ingleside planning district near the intersection of Ocean Avenue and Frida Kahlo Way. See "Balboa Park Station Area Plan," below, for a more detailed discussion of the Balboa Reservoir Development project.

Inner Sunset Planning District

The Inner Sunset planning district, in the west-central portion of the city, is surrounded by Golden Gate Park to the north, the Buena Vista and Central planning districts to the east, the Ingleside planning district to the south, and the Outer Sunset planning district to the west. It consists of primarily low-density residential land uses (RH-1, RH-2, RH-1(D), RM-1, RM-2, and RM-4), with pockets of neighborhood commercial uses at major intersections or along major streets, such as the Inner Sunset Neighborhood Commercial District, West Portal Avenue Neighborhood Commercial District, and Inner Taraval Street Neighborhood Commercial District. Existing height control throughout the planning district is primarily 40-X, including the commercial corridors, except for areas around the University of California, San Francisco (UCSF) Parnassus campus, which are zoned 65-D, 80-D, 130-D, and 220-F. Most of the existing development in the Inner Sunset planning district consists of two- to four-story buildings (approximately 20 to 40 feet in height) with some taller multi-family residential buildings up to six stories (approximately 65 feet in height). Buildings along the commercial corridor on Irving Street and other commercial corridors generally range from two to four stories (approximately 20 to 40 feet in height). The UCSF Parnassus campus in the northeast portion of the planning district includes several taller buildings generally up to eight stories (approximately 80 feet in height), along with several large medical buildings up to approximately 200 feet in height. The Inner Sunset planning district also includes prominent features of the city, such as the Mount Sutro Open Space Reserve. The Inner Sunset planning district includes the entirety of the Inner Sunset neighborhood and portions of the Twin Peaks and West of Twin Peaks neighborhoods.

Marina Planning District

The Marina planning district, in the northern portion of the city, is bordered by the San Francisco Bay to the north, the Northeast planning district to the east, the Western Addition planning district to the south, and the Richmond and Presidio planning districts to the west. It consists primarily of low- to mid-density residential and mixed-residential land uses (RH-1, RH-2 RH-3, RM-1, RM-2, RM-3, RM-4, RC-3, and RC-4), with neighborhood commercial uses along Fillmore Street (Upper Fillmore Neighborhood Commercial District) Lombard, Chestnut Street, and Union Street (Union Street Neighborhood Commercial District) as well as Van Ness Avenue. Commercial corridors on Lombard, Union, and Chestnut streets are zoned NC-2 and NC-3. Existing height control throughout the planning district is 40-X, including the commercial corridors, except for 105-D and 80-A on Laguna and Franklin streets. Most of the existing development in the Marina planning district consists of two- to four-story buildings (approximately 20 to 40 feet in height) with some taller multi-family residential buildings

generally in the four- to eight-story range (approximately 40 to 80 feet in height), and several taller residential structures between 10 and 16 stories (approximately 100 to 160 feet in height). Buildings along the commercial corridors on Union and Chestnut streets generally range from two to three stories (approximately 20 to 30 feet in height), with a few taller buildings generally up to four stories (approximately 40 feet in height). The planning district also contains multiple parks, including Alta Plaza Park, Lafayette Park, Marina Green Park, and Fort Mason. The Marina planning district includes the entirety of the Marina neighborhood and portions of the Pacific Heights neighborhood.

Mission Planning District

The Mission planning district, in the east-central portion of the city, is bordered by the South of Market, Downtown, and Buena Vista planning districts to the north; the South of Market planning district to the east; the Bernal Heights planning district to the south; and the Central and Buena Vista planning districts to the west. It consists of a mix of land use types, including industrial, urban mixed-use, neighborhood-commercial transit, and low-density residential uses (NCT-3, C-3-O, PDR-1-G, UMU, RM-1, RM-2, RH-2, RH-3, and RED). Mission Street (Mission Street Neighborhood Commercial Transit District), Valencia Street (Valencia Street Neighborhood Commercial Transit District), and 24th Street (24th-Mission Neighborhood Commercial Transit District) are the primary commercial corridors in the planning district. Most streets within the planning district contain a mix of uses. Existing height control throughout the planning district is primarily 40-X, 58-X, and 68-X, except for areas around the Zuckerberg San Francisco General Hospital, which are zoned for 105-E. The commercial corridor on Mission Street are zoned 65-B, 80-B, 85-X, and 105-E. The commercial corridor on Valencia Street is zoned 55-X. The commercial corridor on 24th Street is zoned 45-X and 55-X. Most of the existing development in the Mission planning district consists of two to four-story buildings (approximately 20 to 40 feet in height). The planning district also contains multi-family residential buildings that are generally three to five stories (approximately 30 to 50 feet in height), particularly located along Mission Street. The planning district also contains some taller multi-family residential buildings that are generally up to eight stories (approximately 80 feet in height), located northeast of 13th Street and near the intersection of Van Ness Avenue and Market Street. The Zuckerberg San Francisco General Hospital in the eastern portion of the planning district includes several taller buildings generally up to seven stories (approximately 70 feet in height). Buildings along the commercial corridors on Mission and Valencia streets generally range from approximately three to four stories (approximately 30 to 40 feet in height), with a few taller buildings generally up to five and six stories (approximately 55 to 65 feet in height). The Mission planning district contains the entirety of the Mission neighborhood.

Northeast Planning District

The Northeast planning district, in the northeast corner of the city, is bounded by the San Francisco Bay to the north and east, the Downtown planning district to the south, and the Western Addition and Marina planning districts to the west. It consists of neighborhood commercial uses along most streets, such as Polk Street (Polk Street Neighborhood Commercial District) and California Street, Broadway (Broadway Neighborhood Commercial District), Pacific Avenue (Pacific Avenue Neighborhood Commercial District), and Columbus Avenue (North Beach Neighborhood Commercial District), in addition to mixed residential uses and low-, medium-, and high-density residential uses (C-2, C-3-O, RC-3, RC-4, RM-1, RM-2, RM-3, RM-4, and RH-3). Existing height control

throughout the planning district is primarily 40-X and 65-A, except for 200-S, 84-E, and 75-X along Sacramento Street and The Embarcadero. Most of the existing development in the Northeast planning district consists of three- to four-story buildings (approximately 30 to 40 feet in height), with some taller multi-family residential buildings generally up to 11 stories (approximately 110 feet in height) located in the southeastern portion of the planning district and a number of high rise residential towers on top of Russian Hill and Nob Hill. Buildings along the commercial corridors on Columbus Avenue and Broadway generally range from approximately three to four stories (approximately 30 to 40 feet in height). The Northeast planning district also includes prominent features of the city, including Telegraph Hill, the San Francisco Maritime National Historic Park, and a portion of the Port of San Francisco. The Northeast planning district contains the entirety of the Russian Hill, North Beach, and Chinatown neighborhoods and portions of the Nob Hill and Financial District/South Beach neighborhoods.

Outer Sunset Planning District

The Outer Sunset planning district, along the western edge of the city, is bordered by Golden Gate Park to the north, the Inner Sunset planning district to the east, the Ingleside planning district to the south, and the Pacific Ocean to the west. It consists of primarily low-density residential land uses (RH-1, RH-2, RH-3, and RM-1), with pockets of neighborhood commercial uses at major intersections or along neighborhood commercial streets, such as Irving Street (Irving Street Neighborhood Commercial District), Taraval Street (Taraval Street Neighborhood Commercial District), Noriega Street (Noriega Street Neighborhood Commercial District) and Judah Street (Judah Street Neighborhood Commercial District). The existing height control throughout the planning district is mainly 40-X, except for 50-X, 65-A on Taraval Street and 65-A and 105-A on Irving Street. Most of the existing development in the Outer Sunset planning district consists of two- and three-story buildings (approximately 20 to 30 feet in height), with some taller multi-family residential buildings up to four stories (approximately 40 feet in height). Buildings along the commercial corridors on Taraval, Noriega, Irving, and Judah streets generally range from one to three stories (approximately 10 to 30 feet in height), with some taller buildings generally up to four stories (approximately 40 to 50 feet in height). The Outer Sunset planning district contains the entirety of the Sunset/Parkside neighborhood.

Presidio Planning District

The Presidio planning district, in the northern portion of the city, is bordered by the San Francisco Bay to the north, Marina planning district to the east, Richmond planning district to the south, and the Pacific Ocean to the west. The Presidio is under the jurisdiction of the Golden Gate National Recreation Area, which stretches across three counties (Marin, San Francisco, and San Mateo) and protects approximately 80,000 acres of land.⁶ It consists of public recreational land with parks and recreational facilities, museums, and historic buildings. In addition, visitor-serving businesses, including hotels and venues for celebrations and meetings, are also located within the planning district.⁷ Existing height control throughout the district is primarily 40-X, except for 80-E along Letterman Drive. Most of the existing development in the Presidio planning district is two to three stories

⁶ Golden Gate National Recreation Area, *Golden Gate National Recreation Area Foundation Document*, n.d., <http://npshistory.com/publications/foundation-documents/goga-fd-overview.pdf>, accessed November 1, 2021.

⁷ Presidio Trust, *Welcome to the Presidio*, 2021, <https://www.presidio.gov/welcome>, accessed November 1, 2021.

(approximately 20 to 30 feet in height), with some taller buildings up to approximately 50 feet at the Letterman Campus and Main Post. The Presidio planning district includes the entirety of the Presidio neighborhood.

Richmond Planning District

The Richmond planning district, in the northwest portion of the city, is bordered by the Presidio and Pacific Ocean to the north, the Marina and Western Addition planning districts to the east, Golden Gate Park to the south, and the Pacific Ocean to the west. It contains primarily low-density residential land uses (RH-1, RH-2, RH-1(D), RH-3, RM-1, and RM-2), with neighborhood commercial uses along main corridors such as Clement Street (Inner and Outer Clement Neighborhood Commercial Districts), Balboa Street (Inner and Outer Balboa Neighborhood Commercial Districts), and Sacramento Street (Sacramento Street Neighborhood Commercial District) as well as Geary Boulevard (Geary Boulevard Neighborhood Commercial District). Existing height control throughout the planning district is primarily 40-X, except for 80-E and 80-A along California Street and Geary Boulevard, respectively. Most of the existing development in the Richmond planning district consists of two- to four-story buildings (approximately 20 to 40 feet in height), with a small number of taller multi-family residential buildings up to seven stories (approximately 70 feet in height). Buildings along the commercial corridors on Clement, Balboa, California, and Sacramento streets, as well as Geary Boulevard, generally range from one- to four-stories (approximately 10 to 40 feet), with a few taller buildings generally up to five stories (approximately 50 feet in height). In addition, public recreational land, such as Lincoln Park; grounds around the Department of Veteran Affairs Medical Center; and Sutro Heights Park are also located within the planning district. The Richmond planning district includes the entirety of the Inner Richmond, Outer Richmond, Lincoln Park, Seacliff, and Presidio Heights neighborhoods and portions of the Lone Mountain/University of San Francisco (USF) neighborhood.

South Bayshore Planning District

The South Bayshore planning district, in the southeast portion of the city, is bounded by the South of Market planning district to the north, the San Francisco Bay to the east, the San Francisco/San Mateo county line to the south, and the South Central and Bernal Heights planning districts to the west. It consists of a mix of land use types (PDR-2, PDR-1-B, M-2, PDR-1-G, RH-1, RH-2, RH-1(D), RM-1, and RC-3), such as industrial, public, low-density residential, and neighborhood commercial, including a variety of uses along Third Street (Bayview Neighborhood Commercial District). Existing height control is primarily 40-X and 65-J, except for 80-E along the Interstate 280 corridor, and 20/160-lb near India Basin. Most of the existing development in the South Bayshore planning district consists of one- to three-story buildings (approximately 15 to 30 in height), with some taller multi-family residential buildings generally up to seven stories (approximately 70 feet in height) along Innes Avenue and in the Executive Park area in the southern portion of the planning district. Buildings along the commercial corridor on Third Street generally range from one to three stories (approximately 10 to 30 feet). In addition, public recreational land, such as Bayview Park and Candlestick Point State Recreation Area, is also located in the planning district. The South Bayshore planning district contains the entirety of the Bayview Hunters Point neighborhood.

One of the seven major approved projects in the city's pipeline, the India Basin project, is located in the South Bayshore Planning district. (The city's pipeline projects are discussed under "Pipeline Projects" in Chapter 2,

Project Description.) The India Basin project, approved in November 2018, is a multi-phase development with up to 1,575 residential units, approximately 209,100 gross square feet of commercial/retail space, 1,800 parking spaces, and 1,575 bicycle parking spaces. The project will also include approximately 24.5 acres of open space, which includes, but is not limited to, India Basin Shoreline Park and a new park at 900 Innes Avenue. Another of the seven major approved projects in the city's pipeline, the Balboa Reservoir Development project, is located in the Ingleside planning district near the intersection of Ocean Avenue and Frida Kahlo Way. See "Candlestick Point Sub-Area Plan" and "Hunters Point Shipyard Area Plan," below, for a more detailed discussion of development in those areas with adopted area plans.

South Central Planning District

The South Central planning district, at the southern edge of the city, is bordered by the Bernal Heights planning district to the north, the South Bayshore planning district to the east, the San Francisco/San Mateo county line to the south, and the Ingleside planning district to the west. It consists of primarily low-density residential uses (RH-1, RH-2, and RM-1), with neighborhood commercial uses along main corridors, such as Mission Street (Excelsior Outer Mission Street Neighborhood Commercial District) and San Bruno Avenue (San Bruno Avenue Neighborhood Commercial District). Existing height control is primarily 40-X, except for 65-A, 65-X, and 80-X on Mission Street. Most of the existing development in the South Central planning district consists of two- to three-story buildings (approximately 20-30 feet in height), with some taller multi-family residential buildings generally up to four stories (approximately 40 feet in height). Buildings along the commercial corridors on Mission Street and San Bruno Avenue generally range from two to four stories (approximately 20 to 40 feet in height). In addition, public recreational lands, such as McLaren Park, are located within the planning district. The South Central planning district includes the entirety of the Outer Mission, Excelsior, McLaren Park, Visitacion Valley, and Portola neighborhoods.

South of Market Planning District

The South of Market planning district, in the central eastern portion of the city, is surrounded by the Downtown planning district to the north, the San Francisco Bay to the east, the South Bayshore planning district to the south, and the Mission planning district to the west. It consists of a mix of high-density land use types, including commercial districts, residential transit-oriented districts, residential-commercial combined districts, downtown residential districts, and eastern neighborhood mixed-use districts (PDR-1-G, PDR-1-D, C-3-S, C-3-O, UMU, MUR, CMUO, RED, RCD, RH-1, RH-2, and RH-3). Mission and Folsom streets are the primary commercial corridors in this planning district (Folsom Street Neighborhood Commercial Transit District and SoMa Neighborhood Commercial Transit District). However, there are additional commercial corridors on Third, 18th, and 20th streets. Most streets contain a mix of uses within this planning district. Commercial corridors on Third, 18th, and 20th streets are zoned NC-2 and RM-1. Portions of the planning district are zoned 40-X, 45-X, and 68-X, with increasing height and bulk controls near The Embarcadero. Existing height controls in the planning district also include 400-I, 340-I, and 65-X primarily around Rincon Hill and Yerba Buena Gardens. The height of existing development in the South of Market planning district varies widely. Most of the existing development in the South of Market planning district ranges from two to 40 stories (approximately 20 to 400 feet in height). Existing buildings in Mission Bay generally from three to 16 stories (approximately 30 to 160 feet in height). The South of Market

district includes the entirety of the Mission Bay and Potrero Hill neighborhoods and portions of the South of Market and Financial District/South Beach neighborhoods.

Two of the seven major approved projects in the city's pipeline, the 1201A Illinois Street (Potrero Power Station) project and Pier 70 project, are in the South of Market planning district. (The city's pipeline projects are discussed under "Pipeline Projects" in Chapter 2, Project Description.) The 1201A Illinois Street project, approved in April 2020, would construct up to 5.3 million gross square feet of mixed uses and provide approximately 6.3 acres of open space. That project will include approximately 2,400 to 3,000 housing units, 1.2 to 1.9 million gross square feet of commercial uses, 100,000 gross square feet of community facilities, and 2,600 parking spaces. Under that project, most new buildings will range in height from 65 to 180 feet tall, with one building reaching 300 feet tall. The Pier 70 project, approved in May 2018, includes a range of land uses, including approximately 1,645 to 3,025 housing units, 1.1 to 2.3 million gross square feet of commercial uses, and up to 487,000 gross square feet of retail/arts/light-industrial uses. Under that project, new buildings will have a maximum height of 50 to 90 feet.

Treasure Island Planning District

The Treasure Island planning district is on an island within the San Francisco Bay, northeast of the city. Treasure Island and Yerba Buena Island, collectively called the "Islands," are approximately halfway between mainland San Francisco and Oakland. The Islands are the site of the former Naval Station Treasure Island, which was owned and operated by the United States Navy but is currently planned for redevelopment. There are plans to develop large residential complexes, along with commercial, retail, hotel, and open space uses. Construction on the Islands has already begun. Existing height control is mainly 65-TI and 65-TI with flexible zoning, as well as some areas zoned 60-TI, 70-TI, and 125-TI, with some towers between 200 and 400 also permitted. Most of the existing development in the Treasure Island planning district consists of one- to three-story buildings (approximately 10 to 30 feet in height). As part of implementation of the approved redevelopment plans, some buildings generally between six and eight stories (approximately 60 to 80 feet in height) are currently under construction on the Islands.

One of the seven major approved projects in the city's pipeline, the Treasure Island Development Area, is located in the Treasure Island planning district. (The city's pipeline projects are discussed under "Pipeline Projects" in Chapter 2, Project Description.) See "Treasure Island/Yerba Buena Island Area Plan," below, for a more detailed discussion of the Treasure Island Development Area.

Western Addition Planning District

The Western Addition planning district, in the north-central portion of the city, is bordered by the Marina planning district to the north, the Northeast and Downtown planning districts to the east, the Buena Vista planning district to the south, and Golden Gate Park and the Richmond planning district to the west. The planning district comprises a mix of medium-density residential land uses, such as mixed-use developments, residential-commercial combined districts, and residential transit-oriented districts (RTO, RH-1, RH-2, RH-3, RM-1, RM-2, RM-3, and RM-4). A variety of neighborhood commercial districts are also present along major corridors, such as Hayes Street (Hayes Neighborhood Commercial Transit District), Fillmore Street (Upper Fillmore

Neighborhood Commercial District and Fillmore Street Neighborhood Commercial Transit District), Divisadero Street (Divisadero Street Neighborhood Commercial Transit District), Geary Boulevard (Japantown Neighborhood Commercial District), and Gough Street. Existing height controls are primarily 40-X, 50-X, and 80-A. In addition, commercial corridors on Geary Boulevard are zoned 105-E, 130-B, and 160-F, and Gough Street is zoned 240-E and 160-B. Most of the existing development in the Western Addition planning district consists of two- to four-story buildings (approximately 20 to 40 feet in height), with some taller multi-family residential buildings generally up to five stories (approximately 75 feet in height). Buildings along the commercial corridors, such as Geary Boulevard and Gough Street, generally range from two to eight stories (approximately 20 to 80 feet in height). Taller buildings, generally up to 30 stories (approximately 300 feet in height), are in the Fillmore and Cathedral Hill areas. The Western Addition planning district includes the entirety of the Japantown and Western Addition neighborhoods and portions of the Pacific Heights, Hayes Valley, and Lone Mountain/USF neighborhoods.

Area Plans

Figure 3-1, p. 3-3, in Chapter 3, Plans and Policies, shows the areas in the city with adopted area plans. A brief description of the city's adopted area plans is provided below.

Balboa Park Station Area Plan

The Balboa Park Station Area Plan comprises approximately 210 acres in south-central San Francisco, including the City College of San Francisco's main campus, the Ocean Avenue Neighborhood Commercial District, Balboa Park, and the Balboa Park BART station. In addition, it includes parcels that front Ocean, Geneva, and San José avenues. The area provides a range of uses, including institutional, recreational, retail, housing, and transportation uses.

One of the seven major projects in the city's pipeline, the Balboa Reservoir Development project, approved in August 2020, tiers off the Balboa Park Station Area Plan. (The city's pipeline projects are discussed under "Pipeline Projects" in Chapter 2, Project Description.) This project includes redevelopment of the San Francisco Public Utilities Commission-owned 17-acre lower (western) basin of Balboa Reservoir as a mixed-income, multi-family residential development with 1,300 housing units, approximately 174,200 square feet of public and private open space, a 10,000 gross square foot childcare facility, 7,500 gross square feet of retail uses, and 1,050 vehicle parking spaces. Buildings would be up to 78 feet tall.

Bayview Hunters Point Area Plan

The area covered by the Bayview Hunters Point Area Plan is in the southeastern portion of the city. By design, through previous land use planning decisions, the area comprised heavy industrial uses, such as steel manufacturing, ship repair, junk yard operations, and auto wrecking. Buildings associated with the area's residential and industrial uses tend to be low, rarely over three stories high. Substantial conflicts between housing and industrial uses occur, particularly at the eastern edge of the South Basin industrial area, which abuts Candlestick Point State Recreation Area, Yosemite Slough, and areas that experience heavy truck traffic within neighborhood residential and commercial districts. As of June 2021, 505 of the approximately 1,400

housing units proposed under Phase I of the Hunters Point Shipyard Project have been constructed. Phase II of the Hunters Point Shipyard Project is discussed along with the Candlestick Point project under Candlestick Point Sub-Area Plan, below.

Candlestick Point Sub-Area Plan

The area covered by the Candlestick Point Sub-Area Plan is at the southeast corner of San Francisco, immediately north of the San Francisco/San Mateo County line within the area covered by the Bayview Hunters Point Area Plan. The 281-acre area is largely a peninsula landfill with approximately 2.5 miles of shoreline. The area includes the site of the former Candlestick Park stadium; as of 2022, most of the land surrounding the former stadium is a minimally improved surface parking lot. Other features are the Candlestick Point State Recreation Area and Alice Griffith public housing complex. The current land use program proposes 1.6 million gross square feet of primarily research-and-development/office, institutional, neighborhood and regional retail, residential, and hotel uses, along with 106 acres of parks.

One of the seven major approved projects in the city's pipeline, the Candlestick Point project, originally approved in 1997 and amended in 2010, is within the area covered by the Candlestick Point Sub-Area Plan. (The city's pipeline projects are discussed under "Pipeline Projects" in Chapter 2, Project Description.)

The Candlestick Point Project and Phase II of the Hunters Point Shipyard Project 2 are two portions of two separate redevelopment project areas that have been combined into one development project. These projects include over 10,500 housing units, approximately 885,000 gross square feet of retail uses, 150,000 gross square feet of office uses, 2.5 million gross square feet of research-and-development uses, a 220-room hotel, 250,000 gross square feet of artist live/work space, 100,000 gross square feet for community services, 251 acres of recreational facilities and open space, 84 acres of new and improved state parkland, and a 75,000-gross-square-foot performance arena. As of June 2021, approximately 340 of the over 10,500 housing units proposed have been constructed

Central South of Market (SoMa) Plan

The area covered by the Central South of Market Plan surrounds much of the southern portion of the Central Subway transit line, a 1.7-mile extension of the Third Street light rail line that will link the Caltrain station at Fourth and King streets to Chinatown and provide service within the South of Market area. The plan encompasses approximately 230 acres, with 17 city blocks adjacent to downtown San Francisco. The area is bounded by Second Street to Sixth Street and Market Street to Townsend Street, excluding areas that are part of the Downtown Area Plan. A strong cluster of technology companies exists in the area as well as a diversity of other uses, including residential units, local- and regional-serving retail uses, cultural and entertainment facilities, hotels, and production, distribution, and repair (PDR) businesses. In addition, there are numerous undeveloped or underutilized sites, such as surface parking lots or single-story commercial buildings, that have been identified in the plan as sites for future infill development. Buildout under the plan would result in 8,300 additional housing units and 34,250 additional jobs within the city.

Central Waterfront Area Plan

The area covered by the Central Waterfront Area Plan is bounded by Mariposa Street to the north, San Francisco Bay to the east, Islais Creek to the south, and Interstate 280 to the west. This neighborhood of mixed-use buildings is near a variety of transit options. The northern part of the area covered by the Central Waterfront Area Plan, west of Illinois Street, contains smaller parcels with various building types. The southern part of the Central Waterfront is characterized by a more regular pattern of development, with large parcels and primarily single-story buildings. The plan area comprises residential, medical, office, PDR/light industrial, retail, visitor/lodging, cultural, institutional, and educational uses.

Chinatown Area Plan

The area covered by the Chinatown Area Plan encompasses 30 blocks on the eastern slopes of the Nob Hill neighborhood as well as portions of the Russian Hill neighborhood. The area is one to three blocks wide and approximately 10 blocks long. The Financial District lies to the east; to the south is the Union Square retail area. The area's core comprises Grant Avenue, Stockton Street, and the hillside blocks that intersect. The area covered by the Chinatown Area Plan has a mix of uses, consisting of neighborhood commercial, community business, visitor retail, and medium-density residential.

Civic Center Area Plan

The area covered by the Civic Center Area Plan is east of the area covered by the Van Ness Avenue Area Plan. It includes the area north of Market Street, west of the Tenderloin, east of the Western Addition neighborhood, and south of the Pacific Heights and Nob Hill neighborhoods. The area comprises mainly public uses, government facilities, cultural centers, and entertainment venues.

Downtown Area Plan

The area covered by the Downtown Area Plan covers the region north of the South of Market neighborhood, east of the Civic Center, south of the Nob Hill neighborhood, and west of the Northeastern Waterfront. The Downtown area is the principal source of new jobs for city residents, with approximately 56 percent of the roughly 280,000 downtown jobs that are currently held by San Francisco residents. The C-3 districts of the downtown area represent the largest concentration of commercial activity and employment in the San Francisco Bay Area. The four principal land uses in the downtown area are office, retail, hotel, and commercial support. In addition to commercial uses, housing is found in the area, primarily west of the downtown area in Chinatown, north of Market Street, and south of Market Street along Sixth Street.

East South of Market (SoMa) Area Plan

The area covered by the East South of Market Area Plan includes a portion of the region south of Market Street. It allows a mix of land uses, including commercial, entertainment, residential, PDR, and office uses.

Executive Park Sub-Area Plan

The area covered by the Executive Park Sub-Area Plan is in southeast San Francisco, within the Bayview Hunters Point Area Plan. It comprises the southernmost 71 acres of Bayview and is bounded by Bayview Hill to the north, the Candlestick Point Special Use District to the east, Candlestick Point State Recreation Area and San Francisco Bay to the south, and U.S. 101 to the west. Executive Park is an office park but includes some housing. Overall, the area has shifted from office to residential uses. The plan takes advantage of this shift and the area's proximity to open space and transit to allow a mixed-use residential neighborhood that balances housing density and livability, provides the services needed to support local residents, and encourages neighborhood-serving uses in adjacent neighborhoods.

Glen Park Community Plan

The area covered by the Glen Park Community Plan encompasses the neighborhood commercial district along Diamond and Chenery streets as well as the nearby Glen Park BART station. The Glen Park neighborhood is south of Twin Peaks and adjacent to Glen Canyon Park. In addition to the neighborhood commercial district, the area also includes a mix of open spaces, commercial areas, and residential uses.

Hunters Point Shipyard Area Plan

The area covered by the Hunters Point Shipyard Area Plan is in the southeast corner of San Francisco, approximately 1.3 miles northeast of the San Francisco/San Mateo County line and approximately 6 miles south of downtown. The approximately 493-acre landfill peninsula is surrounded by water on three sides. The current land use program proposes 5.1 million gross square feet of primarily research-and-development/office, institutional, neighborhood and regional retail, residential, artist studio, and hotel uses, along with 232 acres of parks.

Market and Octavia Area Plan

The area covered by the Market and Octavia Area Plan sits at the junction of three of the city's grid systems. The north-of-Market, south-of-Market, and Mission grids meet at Market Street, creating a distinct pattern of irregular blocks and intersections. As a result of its central location, the area provides access to regional public transit and offers a wide variety of commercial streets. The area's pattern of land uses integrates a variety of residential housing types with commercial, institutional, and recreational spaces.

Market and Octavia Area Plan Amendment (formerly the Hub Area Plan)

The Market and Octavia Area Plan Amendment is under the Market and Octavia Area Plan, an area that is irregular in shape, approximately 84 acres, and in the easternmost portions of the Market and Octavia Area Plan. The amendment encourages the development of housing as well as safer and more walkable streets, along with an increase in active public spaces and transportation options. Given its unique location, the plan area facilitates accessibility to both city and regional transportation options, including BART and the regional freeway system as well as a dozen transit lines and the city's core streetcar lines. In addition to allowing for residential uses, the plan allows for flexible non-residential uses, including office, institutional, art, and public uses.

Mission Area Plan

The area covered by the Mission Area Plan is bounded by Division Street to the north, Potrero Avenue to the east, Cesar Chavez Street to the south, and Guerrero Boulevard to the west. The area is a well-developed neighborhood with infrastructure, easy access to restaurants, an architecturally rich and varied housing stock, rich cultural resources, and transit access. The primarily residential portions of the Mission, which occupy the blocks on the southeastern and western edges of the area, are also peppered with neighborhood-serving businesses, including corner stores, dry-cleaning services, restaurants, cafes, and bars. Retail uses make up a significant portion of the area, particularly along 24th and Mission streets, which have more than 900 stores and restaurants. In addition, PDR activities support many jobs in the area.

Northeastern Waterfront Area Plan

The area covered by the Northeastern Waterfront Area Plan encompasses the entirety of the waterfront of San Francisco Bay, from Fort Mason on the north to Oracle Park on the south. It also includes multiple sub-areas (i.e., the Fisherman's Wharf Sub-Area, base of the Telegraph Hill Sub-Area, Ferry Building Sub-Area, South Beach Sub-Area). The overarching goal of the plan is to transform vacant warehouses and underutilized properties into commercial and residential uses that complement the growing financial and business centers in downtown San Francisco. The Northeastern Waterfront serves a large portion of the city's tourism industry and includes hotel, restaurant, retail, office, industrial, service, and shipping uses.

Rincon Hill Area Plan

The area covered by the Rincon Hill Area Plan is defined by the hill itself, which crests near First and Harrison streets. The area comprises a 12-block region in proximity to downtown that is generally bounded by Folsom Street, The Embarcadero, Bryant Street, Beale Street, the Bay Bridge approach, and Essex Street. It currently includes several recently constructed residential buildings, older industrial lots, and parking lots. Rincon Hill contains approximately 55 acres of land. Existing land uses in the area include residential, mixed-use, industrial, commercial, retail and entertainment, parking, and institutional uses.

Showplace Square/Potrero Area Plan

The Showplace Square/Potrero Area Plan is bounded by Western South of Market and Mission Bay to the north, the Central Waterfront to the east, Bayview and Hunters Point to the south, and the Mission to the west. The area was delineated as a warehouse and industrial district, which served nearby port facilities. However, since the decline in maritime activity, the area has become an important furniture and interior design center with a national market. Office and home furniture showrooms, re-upholstery shops, and retail stores are found in the area. However, the main land use remains PDR.

Transit Center District (Sub-Area) Plan

The area covered by the Transit Center District Plan consists of approximately 145 acres centered around the Transbay Transit Center, which is situated between the Financial District, Rincon Hill, Yerba Buena Center, and San Francisco Bay. The boundaries of the district are Market Street to the north, The Embarcadero to the east, Folsom Street to the south, and Hawthorne Street to the west. The majority of the land within the district is

privately owned, with the exception of parcels owned by the Transbay Joint Powers Authority. The district allows transit-oriented residential development, interspersed with densely developed mixed uses and public amenities.

Treasure Island/Verba Buena Island Area Plan

The Treasure Island/Verba Buena Island Area Plan covers the entire area on the Islands, approximately 550 acres. Existing land uses on Treasure Island include approximately 110 acres of residential uses, including 908 residential units; 90 acres of open space; 95 acres of parking and roads; and 70 acres of repurposed uses, including institutional, retail, office, and industrial uses, such as a small restaurant, convenience store, event venues, a childcare center, film production facilities, a yacht club, and wastewater treatment plant. Yerba Buena Island includes approximately 97 residential units and 10 non-residential buildings. The plan establishes a long-term revitalization goal as well as land use guidelines for developing the islands with a new neighborhood that includes the facilities and amenities necessary to support a diverse and thriving community.

The city's pipeline projects are discussed under "Pipeline Projects" in Chapter 2, Project Description. One of the seven major projects in the city's pipeline, the Treasure Island and Yerba Buena Island Redevelopment Plan project, approved in April 2011, is located within the area covered by the area plan. That plan includes redevelopment of up to 6,000 housing units; a 500-room hotel; 250,000 gross square feet of retail uses; 300 acres for parks and open spaces; parking; historic rehabilitation and reuse of numbers of buildings for commercial, recreational, or arts use; and Ferry Quay, an intermodal transit hub. Transportation, utility infrastructure, public services, park, and sustainability improvements will be incorporated as well as. Under the plan, permitted building heights will range from 70 to 650 feet.

Van Ness Avenue Area Plan

The area covered by the Van Ness Avenue Area Plan is bounded by San Francisco Bay to the north and Golden Gate Avenue to the south. Van Ness Avenue, one of the widest streets in San Francisco, runs through the central portion of the city in a north-south direction, connecting Market Street to San Francisco Bay. Van Ness Avenue is designated as U.S. 101. The area comprises densely developed mixed-use residences, which are interspersed with landmark buildings, cultural centers, and views of San Francisco Bay.

Western Shoreline Area Plan

The area covered by the Western Shoreline Area Plan, which is the land use plan for San Francisco's coastal zone, extends from Sutro Baths in the northwest corner of the city to the border between San Francisco and San Mateo counties in the southwest corner of the city. The coastal zone is approximately 6 miles long. At the southern end, it includes the Lake Merced area, the zoo, Olympic Club, and the seashore and bluff area at Fort Funston. At the northern end, it includes the Sutro Baths area, Sutro Heights Park, and Point Lobos recreational area. In addition, the coastal zone stretches as far as the Ocean Beach shoreline and includes Golden Gate Park west of 40th Avenue, the Great Highway Corridor, and the adjacent residential blocks in the Sunset and Richmond districts. Most of the western shoreline area is publicly owned, with 14 percent of the land privately owned (9 percent is owned by the Olympic Club and 5 percent is owned by residential and commercial property owners).

Western South of Market (SoMa) Area Plan

The area covered by the Western South of Market Area Plan covers the region south of Market Street between the areas covered by the East South of Market Area Plan, Mission Area Plan, and Showplace Square/Potrero Hill Area Plan. Between 2011 and 2015, approximately 28,900 gross square feet of commercial uses were demolished, and 65 new housing units were constructed within the plan area. The plan area includes non-residential uses along the Townsend Street high-tech corridor, with diverse local and regional job-producing uses extending to the south side of Harrison Street and the elevated highway. North of Harrison Street, development goals call for an increasingly residential neighborhood-type character with a smaller scale that includes new mixed-use development. In addition, approximately 3.1 million gross square feet of commercial uses and 1,300 new housing units are projected to be built in the area in the coming years.

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to land use and planning associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Physically divide an established community
- Cause a significant physical environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing

element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

Effects on land use could result as future actions, including zoning modifications and individual development proposals, redevelop existing land uses to increase the number of housing units in the city. This EIR evaluates the physical impacts that could result from a change in the land use development pattern in the city that would result from the proposed action compared to the 2050 environmental baseline. As illustrated in **Figure 2-1**, p. 2-2, most of the well-resourced areas, as defined by state's opportunity area maps, are in the northern and western portions of the city. Most of the moderate and low-resource areas are in the eastern and southern portions of the city. The proposed action recommends equitable distribution of growth throughout the city, which would mean increased development in well-resourced areas.

To meet the equity objectives, the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. The land use analysis that follows evaluates the significance of impacts that the housing element update could have on the environment compared to the 2050 environmental baseline. In the second significance criterion analyzed below, a conflict between a proposed project and a proposed general plan amendment or general plan policy does not necessarily indicate, under CEQA, that there would be a significant effect on the environment. Any conflicts between the proposed action and policies that relate to physical environmental issues are discussed under the relevant impact analysis topics in this EIR. The compatibility of the proposed action with general plan policies that do not relate to physical environmental issues will be considered by decision makers as part of their decision whether to approve or disapprove the proposed action.

Impacts and Mitigation Measures

Impact LU-1: The proposed action would not physically divide an established community. (*Less than Significant*)

To meet the equity objectives, the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. **Figure 2-9**, p. 2-30, in Chapter 2, Project Description, shows the projected density of housing units for future development consistent with the housing element update. Increased development along the transit corridors and in low-density residential districts within well-resourced areas would not alter the physical layout of the city such that movement within or across the city would be obstructed. Transit corridors act as natural transitions between neighborhoods, and increasing residential density in residential districts would not physically divide an established community. The proposed action would not directly or indirectly create any new physical barriers within the city that would divide established neighborhoods. In addition, the proposed action would not include or lead to future roadways, such as freeways, that would divide the city or isolate planning areas or individual neighborhoods within it.

The proposed policies under the housing element update would allow for a diversity of residential development throughout the city. Future development consistent with the housing element update could result in changes in

land use patterns in traditionally lower-density areas compared to the 2050 environmental baseline (as shown in **Figure 2-3**, p. 2-13, and **Figure 2-9**, p. 2-30, in Chapter 2, Project Description). For example, future development consistent with the housing element update could increase the number of residential projects with ground floor neighborhood services along transit corridors in well-resourced areas. However, these changes would not result in physical barriers to established communities. On the contrary, implementation of the housing element update would result in development within established lot boundaries, in most cases at a scale and density somewhat greater than currently permitted. Therefore, the proposed action would have a *less-than-significant* impact related to the division of an established community, and no mitigation measures are necessary.

Impact LU-2: The proposed action would not cause a significant physical environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

Land use impacts could be considered significant if the proposed action would conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. Environmental plans and policies are those that directly address environmental issues and/or contain targets or standards that must be met to preserve or improve characteristics of the city's physical environment. As described in Section 3, Plans and Policies, the proposed action would not conflict with any adopted environmental plan or policy.

General Plan

Per Government Code section 65584, the housing element update must be consistent with the goals and policies set forth in all other general plan elements. However, the general plan contains many policies that may, in some cases, compete with each other. Therefore, the planning commission and board of supervisors, in deciding whether to approve the housing element update, must decide whether, on balance, the proposed action is consistent with the general plan. The fact that a specific project does not meet all general plan goals, policies, and objectives does not inherently result in a significant effect on the environment within the context of CEQA.

As explained in Chapter 2, Project Description, the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. However, the adoption of the housing element update would not in and of itself legislate any changes in zoning or other land use regulations or approve any development projects. The EIR identifies the reasonably foreseeable indirect environmental impacts that could occur as a result of future actions that would implement the proposed action and development projects that would be consistent with it.

As discussed in Chapter 3, Plans and Policies, the housing element update would not substantially conflict with general plan policies that were adopted for the purpose of avoiding or mitigating an environmental effect. This includes such policies contained in, but not limited to, the air quality and environmental protection elements of the general plan. As mentioned above, consistency with general plan policies is also discussed throughout other sections in Chapter 4.

San Francisco Planning Code

As explained in Chapter 2, Project Description, the housing element update does not include any specific planning code amendments, zoning changes, development projects, or other implementing measures, and no such actions are proposed at this time. Therefore, the housing element update would not result in any changes or conflicts with the planning code. Physical effects that could result from future actions consistent with the housing element update, including potential planning code amendments, are analyzed as secondary effects throughout this EIR.

Plan Bay Area 2050

As discussed in Chapter 3, Plans and Policies, Plan Bay Area 2050 is the long-range integrated transportation and land-use/housing strategy through 2050 for the San Francisco Bay Area. On October 21, 2021, the Association of Bay Area Governments Executive Board and the Metropolitan Transportation Commission jointly approved Plan Bay Area 2050. Plan Bay Area 2050 includes 35 strategies to improve housing, the economy, transportation, and the environment. Plan Bay Area 2050 includes eight goals, ranging from climate protection to economic vitality, with the overarching goal of increasing the capacity for jobs and housing within the San Francisco Bay Area. This goal is driven by the need to meet the growth forecasts identified for San Francisco in Plan Bay Area 2050, the San Francisco Bay Area's Sustainable Communities Strategy, prepared by Association of Bay Area Governments and Metropolitan Transportation Commission. Plan Bay Area 2050 forecasts approximately 578,000 households⁸ in San Francisco by 2050 and includes policies aimed at concentrating this future growth in priority development areas, the overall purpose of which is to reduce dependence on the automobile and to reduce GHG emissions. The approximately 578,000 households forecasted by ABAG would result in approximately 596,000 housing units, a 37,600-unit increase compared with the proposed action. Growth under Plan Bay Area 2050 would be concentrated primarily in the Northeast, Downtown, Mission, South Bayshore, and Richmond planning districts. Although the housing production level and development pattern assumed under the proposed action differs from what is anticipated under Plan Bay Area 2050, the proposed action would not conflict with implementation of Plan Bay Area 2050, as discussed in detail in Chapter 6, Alternatives.

Other Plans and Policies

As discussed in Section 4.4, Transportation and Circulation, the housing element update would not substantially conflict with policies contained in the Bicycle Plan, Better Streets Plan, or Transit First Policy that were adopted for the purpose of avoiding or mitigating an environmental effect. In addition, as discussed in Section 4.6, Air Quality, as well as "Greenhouse Gas Emissions" in this section, the housing element update would be consistent with the Bay Area 2010 Clean Air Plan and Bay Area 2005 Ozone Strategy, which are the regional air quality plans for the San Francisco Bay Area Air Basin and the city's Climate Action Plan, which is the city's guide to achieving net-zero GHG emissions by 2040.

⁸ The terms *households* and *housing units* are not equivalent. "Housing units" refers to the total number of actual dwelling units, whereas "households" refers to dwelling units that are occupied. While Plan Bay Area 2050 forecasts growth in households, the department measures and plans for housing production in housing units.

Other Regulations

Future residential development, as well as any related work involving street networks or open space, as a result of implementation of the housing element update would be required to conform to or comply with specific city, state, and federal plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. These include:

- CEQA Guidelines provisions concerning protection and treatment of tribal cultural resources, human remains, and paleontological resources, as discussed in Section 4.2, Cultural Resources; Section 4.3, Tribal Cultural Resources; Section 4.10, Paleontological Resources; and “Geology and Soils” in this section
- Provisions of the administrative code, building code, planning code, and the city’s noise ordinance, which regulate construction noise and new noise sources, as discussed in Section 4.5, Noise and Vibration
- Air district regulations and permit requirements for new stationary sources of emissions such as diesel emergency generators and fire pumps and other sources of toxic air contaminants, as discussed in Section 4.6, Air Quality
- Article 38 of the city’s health code, which requires that new residential construction projects located in areas of poor air quality install enhanced ventilation to protect residents from the respiratory, heart, and other health effects of living in an area with poor air quality, as discussed in Section 4.6, Air Quality
- The city’s stormwater management ordinance and associated stormwater management requirements and design guidelines and city public works code and health code provisions concerning recycled and non-potable water use, discharges of dewatered groundwater, and construction site runoff, as well as the city’s floodplain management requirements specified in the administrative code, as discussed in “Hydrology and Water Quality” in this section and Section 4.9, Utilities and Service Systems
- Provisions of the San Francisco Building Code (building code) and San Francisco Green Building Code (green building code), which incorporate relevant sections of the California Building Code and California Green Building Standards Code concerning water and energy conservation, as discussed in “Hydrology and Water Quality” and “Energy” in this section as well as Section 4.9, Utilities and Service Systems
- Various regulations identified in the city’s GHG Reduction Strategy, as discussed under “Greenhouse Gas Emissions” in this section
- The federal and California Endangered Species Acts concerning special-status species, the Migratory Bird Treaty Act and California Fish and Game Code (sections 3503, 3503.5) concerning protection of birds, Planning Code section 139 concerning bird-safe building design, and the city’s urban forestry ordinance (chapter 16 of the city public works code) concerning protection of landmark, significant, and street trees, as discussed under “Biological Resources” in this section
- The building code, which incorporates the California Building Code, concerning seismic safety, as discussed under “Geology and Soils” in this section

- Articles 21, 21A, and 22 of the city health code, as well as California Health and Safety Code and California Code of Regulations provisions, concerning handling of hazardous materials and wastes and city building code and fire code provisions concerning fire and life safety, as discussed under “Public Services” and “Hazards and Hazardous Materials” in this section

Conclusion

Any secondary impacts that would occur as a result of implementation of the housing element update are discussed throughout this EIR at a programmatic level. Physical effects that would result from future development consistent with the housing element update would be required to be consistent with applicable zoning, height and bulk district, and land use designations. Future actions consistent with the housing element update would be required to adhere to all applicable environmental regulations and therefore would not conflict with plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. As such, this impact would be *less than significant*, and no mitigation measures are necessary.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update’s environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco’s Waterfront Plan Update, Bay Area Rapid Transit’s Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-LU-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative land use impact. (*Less than Significant*)

As described in Chapter 4, future development consistent with the Port of San Francisco’s Waterfront Plan Update may result in additional development on select Port-owned parcels adjacent to San Francisco’s northeast waterfront, generally between Fort Mason and Islais Creek. However, sites identified for potential development under the Waterfront Plan Update are geographically separate from the well-resourced neighborhoods where future housing construction may occur consistent with the housing element update. As a result, impacts associated with future projects consistent with the housing element update would not be expected to combine with any land use impacts associated with the Waterfront Plan Update to create additional impacts related to the division of established communities or conflicts with existing land use plans, policies, or regulations adopted for the purpose of mitigating environmental effects. Conflicts with existing land use plans and policies are policy issues that do not, themselves, give rise to a significant physical impact related to land

use under CEQA. For this reason, conflicts with plans and policies considered with foreseeable projects would not combine to result in a significant cumulative impact related to land use.

The other cumulative projects identified for the cumulative impact analysis (i.e., Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service and Pennsylvania Avenue Extension) would involve the construction of transportation infrastructure. Consistent with current urban design practice in San Francisco, these projects would aim to reduce vehicle trips, improve transit circulation, and enhance regional connectivity and, therefore, would not physically divide an established community.

The cumulative projects, individually or in combination with the housing element update, would not contribute to cumulatively significant land use impacts. Any new development in the city would be subject to independent CEQA review on a project-by-project basis and subject to policies in the general plan, governing area plans, design guidelines, and the planning code. As such, the housing element update would not combine with cumulative projects to result in a significant cumulative land use impact. For these reasons, the housing element update in combination with cumulative projects would not result in a significant cumulative land use impact, and this cumulative impact would be *less than significant*. No mitigation measures are necessary.

Aesthetics

This section of the EIR analyzes potential aesthetics impacts that could occur as a result of the proposed action and cumulative conditions. The analysis assesses the potential for the proposed action to result in reasonably foreseeable impacts due to a substantial adverse effect on scenic vistas, substantial damage to scenic resources, conflicts with applicable regulations, or from the creation of new substantial light or glare that would affect views in the area. These impacts would occur as a result of future actions that would implement the goals, policies, and actions of the proposed housing element update (i.e., future development consistent with the proposed action). Information supporting this analysis of aesthetic impacts is included in Appendix D of this EIR.

This section discusses the environmental setting, regulatory framework, approach to analysis, environmental impacts, and mitigation measures for aesthetics.

ENVIRONMENTAL SETTING

The regional visual setting of the City and County of San Francisco (city) combines water, islands, bridges, mountains, and urban skylines. The San Francisco Bay includes four major islands that are visible from the city: Alcatraz, Angel Island, Treasure Island, and Yerba Buena Island. The Golden Gate Bridge and Bay Bridge span significant stretches of open water and are highly visible from vantage points around the bay. These bridges also provide views out and around the scenic resources associated with the city's landscape. Visible landmarks include Mount Tamalpais and the Marin Headlands to the north; the Oakland skyline and City of Alameda to the east; the Pacific Ocean to the west; and the Santa Cruz Mountain Range along the San Francisco Peninsula to the south. The Oakland and San Francisco city skylines also complement the region's natural and urban setting.

The aesthetic setting from within the city itself is varied and consists of both built and natural landscapes. The setting reflects the visual characteristics of its topography, street grid, buildings (individually and collectively),

parcs and public open spaces, and major transportation infrastructure. The varied topography, ranging from sea level to approximately 940 feet, provides ocean and bay views from many areas within the city.

Daytime Views

As discussed above, the topography of the city and its position on the tip of the San Francisco Peninsula provides a wide range of views. Prominent landforms include Telegraph Hill, Twin Peaks, Bernal Heights Park, Bayview Park, McLaren Park, and Grandview Park. Views within the city range from proximate views of buildings, towers, streets, and alleyways to long-range views of prominent hills, the San Francisco Bay, the Pacific Ocean, Marin Headlands, the Golden Gate and Bay bridges, and numerous other landmarks.

Table 4.1-2 and Figure 4.1-1, p. 4.1-26, show the locations of 10 daytime visual simulation viewpoints and the direction of each view. The daytime visual viewpoints were selected because they are publicly accessible and include a variety of mostly unobstructed views spread throughout the city, facing different directions.

Table 4.1-2: Representative Daytime Visual Simulation Viewpoints

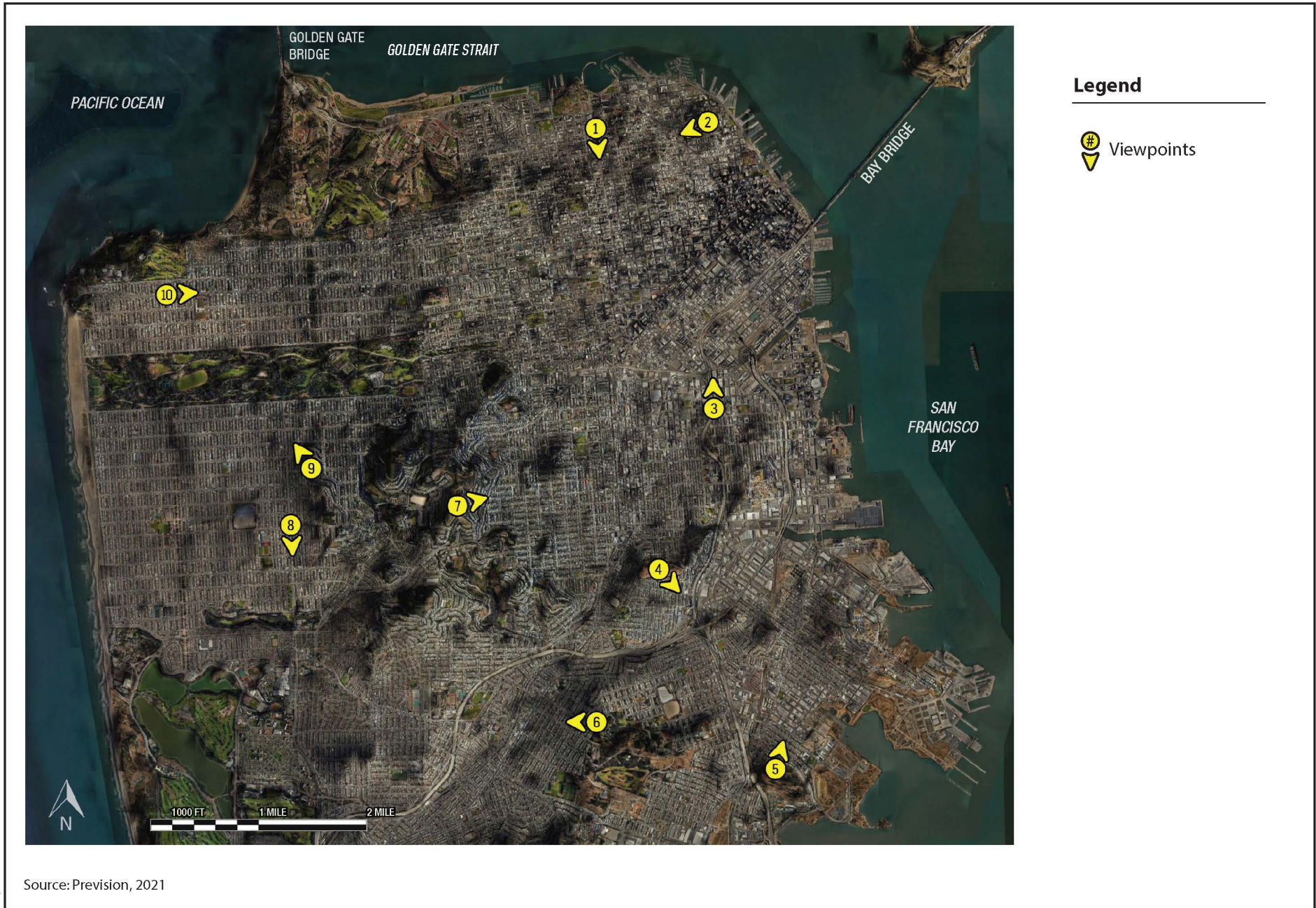
Figure	Representative Area/Focus	Location	Orientation
4.1-2	Viewpoint 1: Transit Corridor View	Van Ness Corridor	Looking south from Lombard Street
4.1-3	Viewpoint 2: Downtown/Northeast Overview*	Coit Tower	Looking west across Columbus Avenue
4.1-4	Viewpoint 3: Transit View	U.S. 101	Looking north towards downtown area
4.1-5	Viewpoint 4: Southeast Overview*	Bernal Heights Park	Looking southeast across the South Bayshore planning district
4.1-6	Viewpoint 5: Southeast Overview*	Bayview Park	Looking north towards downtown area
4.1-7	Viewpoint 6: Eastern Neighborhoods Overview*	McLaren Park	Looking west towards Balboa Park neighborhood
4.1-8	Viewpoint 7: Downtown/Northeast Overview*	Twin Peaks	Looking northeast towards downtown area
4.1-9	Viewpoint 8: Transit Corridor View	19 th Avenue (Highway 1)	Looking south at Quintara Street
4.1-10	Viewpoint 9: Westside Overview*	Grandview Park	Looking west towards Ocean Beach
4.1-11	Viewpoint 10: Transit Corridor View	Geary Boulevard	Looking east from 36 th Avenue

Source: Prevision, Projected Daytime Visual Simulations, 2021.

Notes:

*Indicates a representative vista.

Figures 4.1-2 through 4.1-11, pp. 4.1-27 through 4.1-36, show the representative daytime visual simulations under the 2050 environmental baseline at each viewpoint. The representative daytime visual simulations under the 2050 environmental baseline were prepared by overlaying daytime photographs of 2021 conditions with a computer-generated model of projected future visual massing simulations, and include visual representations of the scale, magnitude, and qualities of development that the department anticipates will occur under the 2050 environmental baseline. If the housing element update is not adopted, this EIR assumes that housing



Source: Prevision, 2021

**Figure 4.1-1
 Representative Daytime Visual Simulation Viewpoint Locations**

Van Ness Corridor View: Looking south from Lombard Street



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

Coit Tower View: Looking west across Columbus Avenue



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.

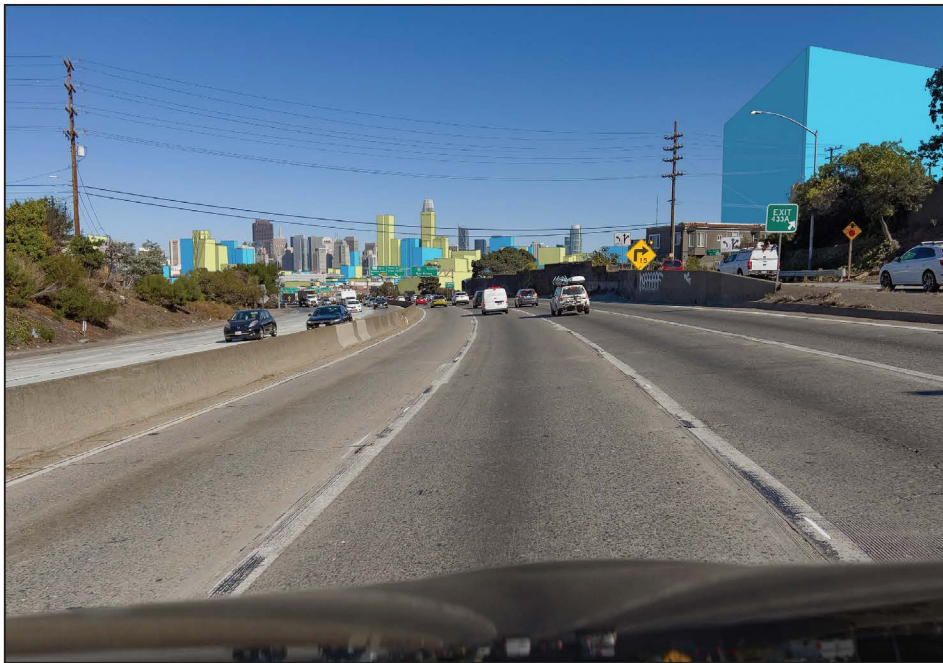


Legend

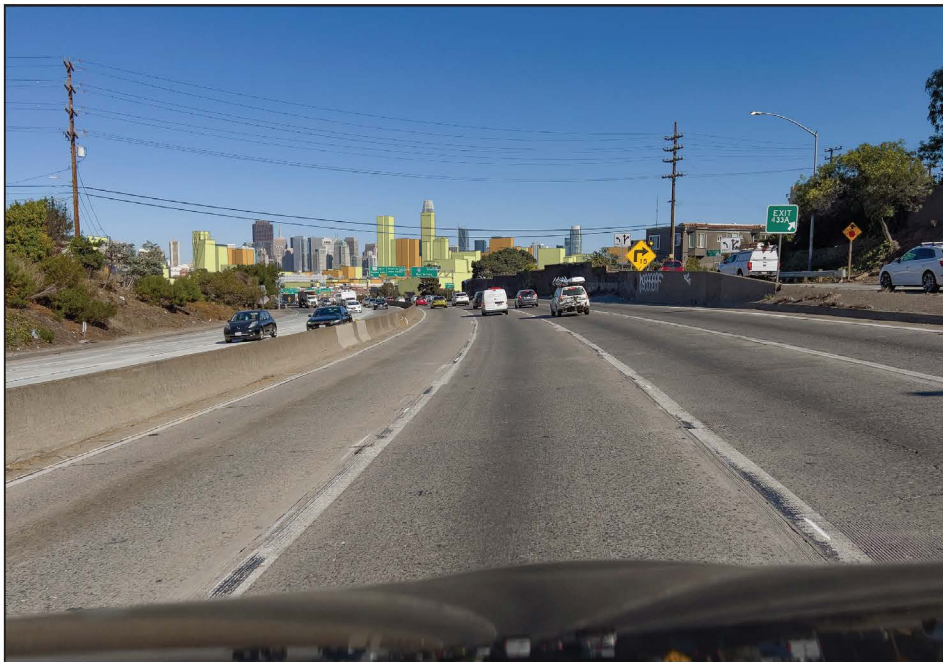
- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

U.S. 101: Looking north at Downtown



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

Bernal Heights Park View: Looking southeast across the South Bayshore planning district



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

Bayview Park View: Looking north towards Downtown



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

McLaren Park View: Looking west towards Balboa Park neighborhood



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

Twin Peaks View: Looking northeast towards Downtown



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

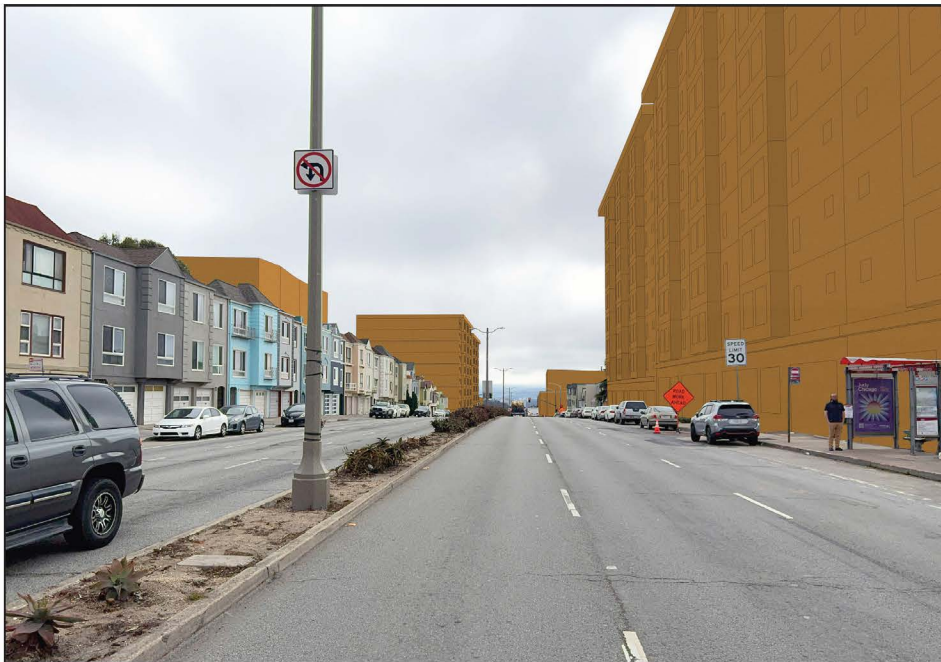
Source: Prevision, 2021

Graphics: 005362012-21-2022) J.C

19th Avenue View: Looking south at Quintara Street



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

Grandview Park View: Looking west towards Ocean Beach



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

Geary Boulevard View: Looking east from 36th Avenue



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

development would continue to occur under the existing policies and measures of the existing 2014 housing element. As such, the analysis in this EIR uses projected future conditions (2050) as a baseline against which the significance of environmental impacts will be assessed, not existing conditions (see Chapter 4, Environmental Setting and Impacts, for a description of the 2050 environmental baseline).⁹ The likelihood and pattern of development under the 2050 environmental baseline was modeled by the department and is used in this section to project aesthetics impacts for the analysis. For both the 2050 environmental baseline and the proposed action, the simulations show the pipeline projects assumed to be constructed by 2050.

Table 4.1-2, p. 4.1-27, also indicates views that have been identified as representative vistas. San Francisco contains many vistas from elevated vantages such as on hillsides or in high-rise buildings, which show a large portion of the city and beyond. Some vistas contain views out and over the landscape and may be sweeping, with a 360-degree view in all directions, while others are narrower, and limited in one direction in a manner that reduces the line-of-sight angle and amount of vista that is visible. Vistas also range in visual quality and can contain disjointed or degraded land uses for lower-quality views, be commonplace and of moderate visual quality, or provide exemplary, high-quality views that showcase the city's character.

Viewpoint 1 (**Figure 4.1-2**, p. 4.1-27) is a street-level transit corridor view of the northwest corner of the intersection of Lombard Street and Van Ness Avenue in the Marina planning district. Low- to mid-rise commercial and residential structures on either side of Van Ness Avenue dominate the view. Viewpoint 2 (**Figure 4.1-3**, p. 4.1-28) shows a view looking west from Coit Tower; the Northeast and Marina planning districts are visible in the foreground, while Twin Peaks and Sutro Tower are visible in the background. Viewpoint 3 (**Figure 4.1-4**, p. 4.1-29) depicts U.S. 101 on the border of the Mission and South of Market planning districts. Within the freeway corridor, mixed shrubbery, residential buildings, and industrial elements are visible, but the views are dominated by the Downtown skyline. Sweeping views of the Bernal Heights and South Bayshore planning districts seen in Viewpoint 4 (**Figure 4.1-5**, p.4.1-30) consist of commercial, industrial, and residential developments and prominent natural features such as Bayview Park and the San Francisco Bay in the South Bayshore planning district. Looking north from Bayview Park, Viewpoint 5 (**Figure 4.1-6**, p. 4.1-31) depicts views from the South Bayshore planning district to the Downtown planning district. The Downtown skyline, Bay Bridge, Yerba Buena Island, and east bay are visible in this view. Viewpoint 6 (**Figure 4.1-7**, p. 4.1-32) shows the view of South Central and Ingleside planning districts and the Pacific Ocean from the southern portion of the city, looking west, and consists of residential and institutional uses. Viewpoint 7 (**Figure 4.1-8**, p. 4.1-33) shows the city view from Twin Peaks: looking northeast towards the Mission, Downtown, and South of Market planning districts the Downtown skyline, and east bay are visible, and prominent natural features such as the San Francisco Bay and Mount Diablo. Viewpoint 8 (**Figure 4.1-9**, p. 4.1-34) shows a transit corridor view on 19th Avenue and Quintara Street bordering the Inner Sunset and Outer Sunset planning districts in the western portion of the city; the views are largely dominated by low-rise residential structures. From Grandview Park in Viewpoint 9 (**Figure 4.1-10**, p. 4.1-35), residential development, Golden Gate Park, the Richmond planning district, the Golden Gate Strait, and the Marin Headlands are visible. Finally, Viewpoint 10 (**Figure 4.1-11**, p. 4.1-36) shows a transit corridor view from Geary Boulevard in the western portion of the city looking east; similar to Quintara Street, the views are largely dominated by low-rise residential structures in the Richmond planning district.

⁹ For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

Light and Glare

Sources of daytime light and glare around the city are generally limited to the interior and exterior lights of buildings and lighting visible through windows, parking lots, and city streets, as well as from the elevated freeways and off-ramps. These sources of light are typical of those in a developed urban area. In addition, cars and trucks traveling to, from, and within the city represent a source of glare.

Nighttime Sky Brightness

Nighttime sky brightness is caused by light during hours of darkness, from glare, light escaping from interior spaces (“light trespass”), light pollution, and use of high output exterior lighting. *Light pollution* is brightening of the night sky caused by street lights and other human-made sources. Sources of light and glare are common and abundant in the city’s urban environment, including streetlights, vehicular parking lot lights, security lights, vehicular headlights, internal building lights, and reflective building surfaces and windows. Any light source could contribute to nighttime sky brightness or light pollution, however, high-output lighting (e.g., streetlights and advertising signs) is considerably more impactful than low output lighting (e.g., residential lighting). Levels of nighttime sky brightness vary in different areas of the city, with areas of greater development density, such as downtown, generating higher levels of nighttime brightness relative to portions of the city with lower-density patterns of development.

Table 4.1-3 and Figure 4.1-12 show the locations of the four nighttime visual simulation viewpoints and the direction of each view. The nighttime visual viewpoints were selected because they are publicly accessible and include unobstructed views of expansive portions of the city, facing different directions. Figures 4.1-13 through 4.1-16, pp. 4.1-40 through 4.1-43, show the representative nighttime visual simulations under the 2050 environmental baseline at each viewpoint. The representative nighttime visual simulations under the 2050 environmental baseline were prepared by overlaying nighttime photographs of 2021 conditions with a computer-generated model of projected future visual massing simulations based on department assumptions.¹⁰

Table 4.1-3: Representative Nighttime Visual Simulation Viewpoints

Figure	Representative Area/Focus	Location	Orientation
4.1-13	Viewpoint 1: SoMa Overview	Twin Peaks	Looking northeast towards South of Market planning district
4.1-14	Viewpoint 2: South Bayshore Overview	Twin Peaks	Looking southeast towards South Bayshore planning district
4.1-15	Viewpoint 3: Ocean Beach Overview	Grandview Park	Looking west towards Ocean Beach
4.1-16	Viewpoint 4: Downtown Overview	Grandview Park	Looking northeast towards Downtown planning district

Source: Prevision, Projected Nighttime Visual Simulations, 2021.

¹⁰ More information about the modeling and growth assumptions the department used to project the likelihood and pattern of development under the 2050 environmental baseline and housing element update is included in the Modeling Assumptions Memorandum included in Appendix C of this EIR.



Figure 4.1-12
Representative Nighttime Visual Simulation Viewpoint Locations




Twin Peaks View: Looking northeast towards SoMa planning district



Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

-  Pipeline Projects Assumed to be built by 2050
-  Additional Development Under 2050 Environmental Baseline
-  Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

Twin Peaks View: Looking southeast towards South Bayshore planning district

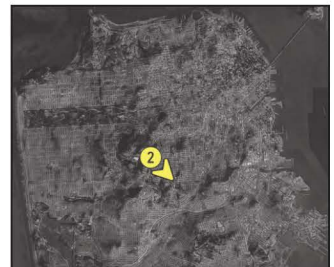


2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

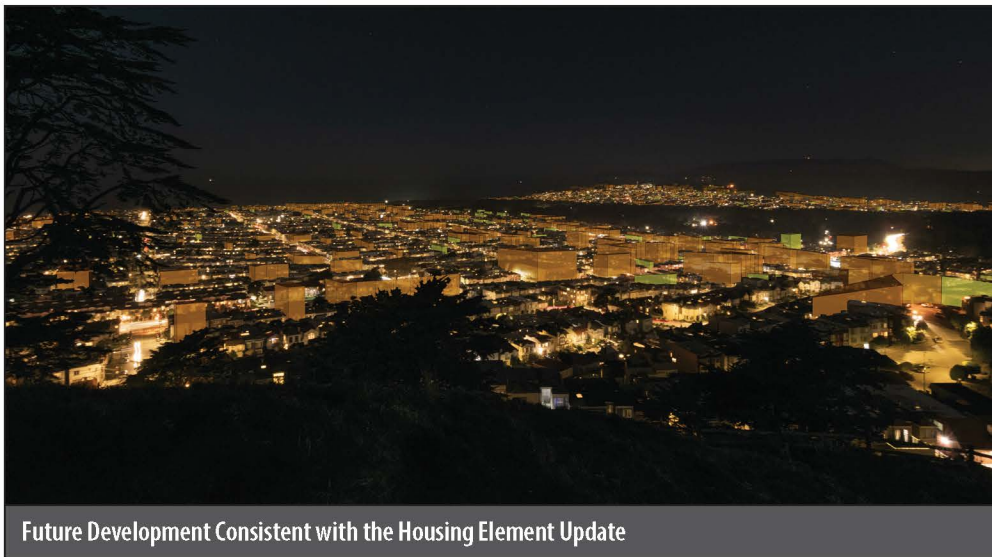
Source: Prevision, 2021

Graphics: 0053620 (4-8-2022) JC

Grandview Park View: Looking west towards Ocean Beach



2050 Environmental Baseline



Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

- Pipeline Projects Assumed to be built by 2050
- Additional Development Under 2050 Environmental Baseline
- Additional Development Assumed Under the Proposed Action

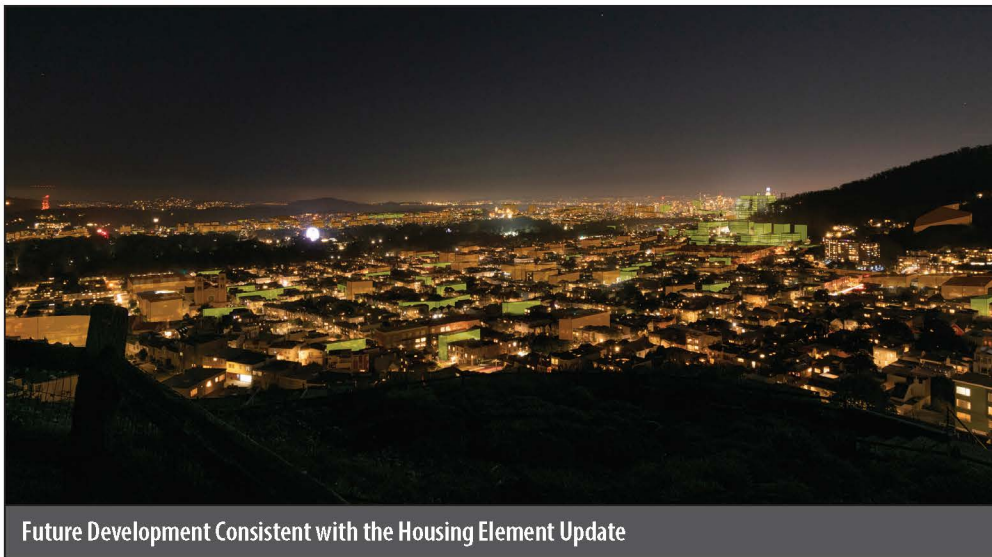
Source: Prevision, 2021

Graphics: 0053620 (4-8-2022) JC

Grandview Park View: Looking northeast towards Downtown planning district

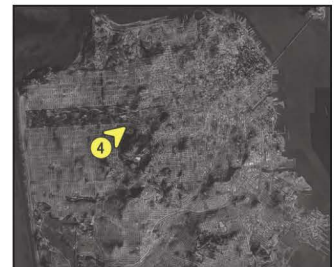


2050 Environmental Baseline






Future Development Consistent with the Housing Element Update

Note: This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.



Legend

-  Pipeline Projects Assumed to be built by 2050
-  Additional Development Under 2050 Environmental Baseline
-  Additional Development Assumed Under the Proposed Action

Source: Prevision, 2021

Viewpoints 1 and 2 (Figures 4.1-13 and 4.1-14, pp. 4.1-40 and 4.1-41) show nighttime views from Twin Peaks towards northeastern and southeastern portions of the city, respectively. Viewpoints 3 and 4 (Figures 4.1-15 and 4.1-16, pp. 4.1-42 and pp. 4.1-43) show nighttime views from Grand View Park of the west and northeastern portions of the city, respectively. Viewpoint 1 (Figure 4.1-13) is dominated by bright lighting from the Downtown and South of Market planning districts, the Port of San Francisco properties, and east bay, while Figures 4.1-14 and 4.1-15 show comparatively less nighttime lighting as the viewpoints overlook open space areas such as Mount San Bruno, Golden Gate Park, and the Marin Headlands. Figure 4.1-16 shows both the lack of nighttime lighting at Golden Gate Park, the Presidio planning district, and Mount Sutro Open Space Reserve and the bright nighttime lighting in the background in the Downtown planning district.

REGULATORY FRAMEWORK

State

State Scenic Highways

Caltrans may designate a state highway as scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.¹¹ There are no roadways within or near the city that are designated in state plans as a scenic highway. I-280, State Route (SR) 1, SR 35, and a portion of I-80 are eligible state scenic highways through the city, but they are not officially designated.¹²

State Nighttime Sky – Title 24 Outdoor Lighting Standards and Recommendations

California's Title 24, Part 6 Building Energy Efficiency Standards (Energy Code) require the California Energy Commission to adopt energy efficiency standards for outdoor lighting for both the public and private sector. These standards became effective January 1, 2020, and include requirements for outdoor lighting for residential and nonresidential development. Although the focus of the code is on energy efficiency, the energy commission acknowledges that successful lighting design also balances the priorities of occupant comfort, health, and wellness. These objectives are detailed in the California Lighting Technology Center's guidance for meeting California's 2019 Building Energy Efficiency Standards. The new standards will likely lead, indirectly, to improving the quality of outdoor lighting and help reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. In addition, nonresidential land uses have different lighting standards, based on the Energy Code, that are set by classifying areas by lighting zone. Lighting requirements for dark and rural

¹¹ California Department of Transportation, *Scenic Highways – Frequently Asked Questions*, 2022, <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways/lap-liv-i-scenic-highways-faq2>, accessed February 8, 2022.

¹² California Department of Transportation, *List of Eligible and Officially Designated State Scenic Highways*, 2019, <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>, accessed November 29, 2021.

areas are stricter to protect the areas from new sources of light pollution and light trespass.^{13,14} San Francisco is designated as LZ3 (moderately high: urban areas).

CEQA Section 21099 (Senate Bill 743)

CEQA section 21099 exempts most urban infill projects from consideration of aesthetics impacts and eliminates level of service as a metric for measuring traffic impacts in transit priority areas. Section 21099 states, “aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment.” This means that aesthetics and is no longer considered in determining if a project has the potential to result in significant environmental effects provided a project meets all of the following three criteria:

1. The project is in a transit priority area; and
2. The project is on an infill site; and
3. The project is residential, mixed-use residential, or an employment center.

Most residential, mixed-use residential, and employment center projects in San Francisco meet all three of the above criteria.

Local

San Francisco General Plan

Policies of the San Francisco General Plan (general plan) related to aesthetics are found in the urban design element and, to a lesser extent, other elements, as listed below. The urban design element of the general plan is concerned with the physical character and environment of the city with respect to housing development and preservation. General plan elements are discussed in Chapter 3, Plans and Policies. In addition, the general plan recognizes the importance of views and viewsheds created by topography and street views. General plan objectives and policies discussed in this section on aesthetics are as follows:

Transportation Element

Policy 2.3: Design and locate facilities to preserve the historic city fabric and the natural landscape and protect views.

Policy 24.1: Preserve existing historic features such as streetlights and encourage the incorporation of such historic elements in all future streetscape projects.

¹³ California Lighting Technology Center, UC Davis, *Nonresidential Lighting and Electrical Power Distribution: A Guide to Meeting or Exceeding California's 2019 Building Energy Efficiency Standards*, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/lighting>, accessed August 27, 2021.

¹⁴ California Lighting Technology Center, UC Davis, *Residential Lighting: A Guide to Meeting or Exceeding California's 2019 Building Energy Efficiency Standards*, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/lighting>, accessed August 27, 2021.

Urban Design Element

- Objective 3: Moderation of major new development to complement the city pattern, the resources to be conserved and the neighborhood environment.
- Policy 3.3: Promote efforts to achieve high quality of design for buildings to be constructed at prominent locations.
- Policy 3.4: Promote building forms that will respect and improve the integrity of open spaces and other public areas.
- Policy 3.5: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development.
- Policy 3.6: Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction.
- Policy 3.7: Recognize the special urban design problems posed in development of large properties.
- Policy 3.8: Discourage accumulation and development of large properties, unless such development is carefully designed with respect to its impact upon the surrounding area and upon the city.
- Policy 3.9: Encourage a continuing awareness of the long-term effects of growth upon the physical form of the city.

Arts Element

- Policy 1.1: Promote inclusion of artistic considerations in local decision-making.

As discussed above, I-280 is an eligible state scenic highway (although not officially designated) and is part of the 49-Mile Scenic Drive.¹⁵ The 49-Mile Scenic Drive is not a city-designated scenic route. The urban design element identifies streets according to the quality of their views, with an emphasis on the protection of public views of open space and water bodies.

San Francisco Planning Code

The San Francisco Planning Code (planning code) contains provisions to reduce or prevent light and glare in the city. This includes section 311 and the Residential Design Guidelines, section 312 and the Neighborhood Commercial Design Guidelines, as well as the Industrial Area Design Guidelines and the planning commission prohibition on reflective glass (discussed below).

San Francisco Planning Code – Height and Bulk Districts

San Francisco uses a zoning system with two separate sets of districts: one that regulates land uses, and another that regulates height and bulk. There are 111 different height and bulk districts within the city.

¹⁵ San Francisco To Do, *49-Mile Scenic Drive – San Francisco*, 2017, <https://www.sftodo.com/sanfrancisco/scenic-49-mile-drive/>, accessed: December 10, 2021.

San Francisco Planning Code – Standards for Bird-Safe Buildings

Planning code section 139, Standards for Bird-Safe Buildings, establishes building design standards relate to building design and light and glare to reduce avian mortality rates associated with bird strikes.¹⁶ The building standards are based on two types of hazards: (1) location-related hazards where the siting of a structure inside or within 300 feet of an urban bird refuge creates an increased risk to birds, and (2) feature-related hazards, which may increase risks to birds regardless of where the structure is located. For new building construction where the location-related standard would apply, the façade requirements include no more than 10 percent untreated glazing and minimal lighting. Any lighting that is used must be shielded and prevented from resulting in any uplighting. Feature-related hazards include free-standing glass walls, wind barriers, skywalks, balconies, and greenhouses on rooftops that have unbroken glazed segments 24 square feet or larger in size. Any structure that contains these elements must treat 100 percent of the glazing.

San Francisco Planning Commission Resolution 9212

San Francisco Planning Commission Resolution 9212, as well as the Industrial Area Design Guidelines mentioned above, generally prohibits the use of mirrored or reflective glass in new buildings.

San Francisco Public Works Code

Public works code section 800 establishes protections for the city's trees. The two categories receiving the highest protection are the city's Protected and Landmark Trees. Protected Trees include street trees, significant trees, and landmark trees. Removal of any of these trees requires a permit. Landmark Trees have the highest level of protection in the city. These are trees that meet criteria for age, size, shape, species, location, historical association, visual quality, or other contribution to the city's character and have been found worthy of landmark status after public hearings at both the Urban Forestry Council and the San Francisco Board of Supervisors. Temporary landmark status is also afforded to nominated trees currently undergoing the public hearing process. There are currently 20 Landmark Trees in the city.¹⁷

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to aesthetics associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

¹⁶ San Francisco Planning Department, Standards for Bird-Safe Buildings, July 14, 2011, https://sfplanning.org/sites/default/files/documents/reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%202011-30-11.pdf, accessed February 11, 2022.

¹⁷ San Francisco Public Works, Significant and Landmark Trees, 2022, <https://www.sfpublicworks.org/services/significant-and-landmark-trees>, accessed March 23, 2022.

Significance Criteria

The proposed action would be located entirely within an urbanized area. No rural areas would be affected by future development consistent with the proposed action. The proposed action would have a significant effect if it would:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Conflict with applicable zoning and other regulations governing scenic quality
- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

Any anticipated changes in urban form and visual quality would be the result of future development projects consistent with the housing element update. Future street network changes and open space improvements consistent with the housing element update could also have physical effects.

In general, visual quality is subjective and the degree of change perceived by observers varies. For example, some observers could be more keenly aware of any increase in building height or overall density, and these observers could find these changes substantially disruptive. On the other hand, it is likely that some observers would not consider the changes to the visual setting to be substantial, while still others would see a benefit in certain alterations of the built environment. The significance determination is based on consideration of the extent of change related to visibility from publicly accessible viewpoints, as well as the degree of visual contrast

and compatibility in scale and character between future development anticipated under the housing element update compared to the 2050 environmental baseline, and the sensitivity of the affected view. The analysis also considers whether anticipated changes to visual quality or views resulting from future development consistent with the proposed action would be substantial and adverse.

This EIR also considers impacts to scenic vistas. Scenic vistas generally encompass a wide area with long-range, high-quality views to surrounding elements in the landscape. In San Francisco, “high-quality” views are distinctive views that highlight scenic resources that represent the city’s unique characteristics, such as the Golden Gate and Bay bridges, the Painted Ladies, and Sutro Tower. Such vistas are often available to viewers due to elevated vantages, such as from hillsides, skyscrapers or other prominent structures (such as Coit Tower), with views out and over the landscape. In addition, vistas have a directional range. In other words, some areas have scenic vistas with views in all directions, while others may be limited in one direction in a manner that reduces the line-of-sight angle and amount of vista that is visible for a narrower vista.

Representative daytime and nighttime visual simulations were prepared to illustrate how future development consistent with the housing element update could affect the urban form and levels of nighttime lighting compared to the 2050 environmental baseline.

Representative Daytime Views

To simulate the effect of future development consistent with the housing element update on daytime views, representative computer-generated visual massing simulations were developed for the 2050 environmental baseline and for future development consistent with the housing element update.

Except for pipeline projects, the visual simulations do not depict actual expected development; instead, the visual simulations model projected conditions based on assumptions that are programmatic in nature and include visual representations of the scale, magnitude, and qualities of the 2050 environmental baseline and future development consistent with the housing element update. The visual simulations present the general height and bulk of building massing that could result from future development consistent with the housing element update; the simulations do not take into account building aesthetics and façade detailing that would be required under development of an individual project. Simple graphical representations of windows are included on the simulations to provide a general sense of building height and the number of stories that would likely result from future zoning changes that could occur consistent with the housing element update.

Representative Nighttime Views

Nighttime views are dependent on the overall effect of city lighting on nighttime sky brightness. To simulate the effects of nighttime lighting, a broad perspective over large portions of the city and sky, as well as higher-elevation vantage points that are relatively unobstructed, are required.

Current and historical nighttime sky brightness for most areas on the globe has been measured via satellite using a *visible infrared imaging radiometer suite* (i.e., satellite imagery) instrument to collect visible and infrared imagery and global observations of land, atmosphere, cryosphere and oceans. Data collected from monthly light measurements is publicly available and can be found on websites such as <https://www.lightpollutionmap.info/>.

These websites also include visualizations of nighttime brightness displayed graphically to illustrate relative levels of nighttime light radiance¹⁸ over San Francisco, including variations in lighting levels in different parts of the city. Because data is available for past years, it is possible to observe general trends with respect to levels of nighttime light radiance and its change over time which may be evaluated for correlation between patterns of urban development and changes in nighttime sky brightness. Based on the satellite imagery, the Downtown, South of Market, Financial District, and Northeast planning districts, and Port of San Francisco properties currently and historically generate higher levels of nighttime brightness than the rest of the city (Figure 4.1-13, p. 4.1-40).

To evaluate the effect on sky brightness under the 2050 environmental baseline and for future development consistent with the proposed action, the 2021 satellite imagery was adjusted to account for conditions that are in line with historical trends to account for changes in lighting generated from nonresidential lighting sources. For residential lighting sources, the location and number of residential units modeled for future development consistent with the proposed action and the 2050 environmental baseline were mapped. A standardized light radiance output value for a typical residential unit and corresponding radius of illumination was added to simulate the additional net new nighttime lighting contribution on a per-unit basis.¹⁹ The resulting citywide map of aggregated new lighting values associated with nonresidential and residential sources was then merged with an adjusted version the 2021 satellite imagery of San Francisco to arrive at the projected nighttime sky brightness maps associated with the 2050 environmental baseline.²⁰

The adjusted satellite imagery and the nighttime simulations were used as a tool to evaluate the change in nighttime sky brightness. Nighttime sky brightness can result in significant impacts as elevated amounts of light at night lowers human melatonin production, which has been linked sleep deprivation, fatigue, headaches, stress, anxiety, and other health problems. A significant change in nighttime sky brightness is considered to be a substantial increase in nighttime radiance levels in one or more areas of the city. For the purposes of this analysis, a qualitative approach was used for determining significance.

Impacts and Mitigation Measures

Impact AE-1: The proposed action would not have a substantial adverse effect on a scenic vista. (*Less than Significant*)

The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. The proposed policies under the housing element update would allow for a diversity of residential development throughout the city. Future development

¹⁸ Radiance units are 10^{-9} watts / centimeter² * steradians, and are defined as the measure of the light emitted, reflected, transmitted by a surface lighting that received by the visible infrared imaging radiometer suite instrumentation looking at that surface from satellite orbit. A steradian is a unit of measurement of a round surface area on a sphere (i.e., if there is a cone emanating from the center of a sphere, the rounded area it encompasses at the edge of the sphere is measured in steradians).

¹⁹ Silverman and Light, SF Light Pollution Analysis – Lighting Methodology, 2022. See Appendix D of this EIR. See Figures 4.1-13 through 4.1-16, pp. 4.1-40 through 4.1-43.

²⁰ Prevision, Projected Nighttime Sky Brightness Maps, 2021.

consistent with the housing element update could result in increased building heights and development density in traditionally lower-density areas. As described under “Approach to Analysis,” above, this impact analysis is based on one possible distribution of future housing development growth that could occur based on modelling conducted by the department to inform the programmatic environmental impact analysis. While the impact analysis is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows. Therefore, adverse effects on a scenic vista could occur anywhere within the city.

Ground-level views may be considered scenic vistas if they provide a long-range, high-quality view of the surrounding landscape, such as a city street on a tall hill or a highway approach that has an open view of the skyline. Representative ground-level views of future development consistent with the housing element update compared to development under the 2050 environmental baseline are shown in Viewpoint 1 (Figure 4.1-2, p. 4.1-27), Viewpoint 3 (Figure 4.1-4, p. 4.1-29), Viewpoint 8 (Figure 4.1-9, p. 4.1-34), and Viewpoint 10 (Figure 4.1-11, p. 4.1-36). Viewpoints 1, 8, and 10 offer long-range views of the city through narrow corridors created by buildings on either side of the street. These viewpoints are not considered scenic vistas because the narrow lines of sight created by structures consistent with future development in both the 2050 environmental baseline and the proposed action do not provide the viewer with a wide, high-quality view of the surrounding landscape. Viewpoint 3 may be considered a scenic vista because of its views of the downtown skyline as users travel north on U.S. 101; however, the narrowness of the viewpoint and intervening utility lines and infrastructure detract from the quality of view. Therefore, Viewpoint 3 is not considered a scenic vista. Ground-level views are analyzed in greater detail under Impact AE-3.

Vista Views of the City

Views of the city are provided by public vistas throughout the city. Representative vistas of future development consistent with the housing element update compared to the 2050 environmental baseline are shown in Viewpoint 2 (Figure 4.1-3, p. 4.1-28), Viewpoint 4 (Figure 4.1-5, p. 4.1-30), Viewpoint 5 (Figure 4.1-6, p.4.1-31), Viewpoint 6 (Figure 4.1-7, p. 4.1-32), Viewpoint 7 (Figure 4.1-8, p. 4.1-33), and Viewpoint 9 (Figure 4.1-10, p. 4.1-35).

Future development consistent with the housing element update would result in about 7,600 fewer housing units in the Downtown and South of Market planning districts than under the 2050 environmental baseline; thus, these areas are projected to include reduced building densities and heights compared to the 2050 environmental baseline. This reduction in future development would not result in a substantial adverse effect on views of the downtown area and northeast side of the city from the representative scenic vistas (see Viewpoints 2 and 7). In Viewpoint 2, representative building massing of future development consistent with the proposed action would not change the overall form or quality of the mid- and long-range views from Coit Tower. The view would still be dominated by mid- and high-rise buildings with Twin Peaks and Sutro Tower visible in the distance. Viewpoint 7 offers a higher and wider range of the landscape, but experiences similar changes in the proposed action’s visual simulation as Viewpoint 2. Building height increases would be noticeable, however, the scenic vista would not change in form or quality. From the Twin Peaks vantage, the increased building height and density would blend in with the overall city landscape; further, distant views of the San Francisco Bay and east

bay would not be impacted at all due to the city's topography, resulting in views to those features from Twin Peaks remaining unobstructed.

Similarly, future development consistent with the housing element update would not result in substantial changes to views of the east and south sides of the city (Viewpoints 4 and 5). The proposed action would result in about 1,400 fewer housing units in the Bernal Heights, South Bayshore, and South Central planning districts than under the 2050 environmental baseline; thus, these areas are projected to include reduced building densities and heights compared to the 2050 environmental baseline. In Viewpoint 4, taller buildings associated with pipeline projects would be more noticeable as they approach the San Francisco Bay shoreline, however, the proposed action would not lead to increased development in this portion of the city. The proposed action's effects on Viewpoint 5 would be similar to the 2050 environmental baseline as most of the additional development in Viewpoint 5 can be attributed to pipeline projects, with very little future development resulting from the proposed action. Thus, views would not substantially change due the housing element update in Viewpoints 4 and 5.

Future development consistent with the housing element update would also result in discernably denser and taller development in the west side of the city (Viewpoints 6 and 9). The proposed action would result in approximately 44,000 more housing units in the Ingleside (Viewpoint 6), Inner Sunset, Outer Sunset, and Richmond (Viewpoint 9) planning districts than under the 2050 environmental baseline; thus, these areas are projected to include increased building densities and heights compared to the 2050 environmental baseline. In Viewpoint 6, the level of development consistent with the proposed action would be similar to that of the 2050 environmental baseline. In both the 2050 environmental baseline and the proposed action, building massing would remain consistent and the Pacific Ocean would still be visible in the west. From a high vantage point (such as Grandview Park in Viewpoint 9), views of the Golden Gate Park, Golden Gate Strait, and the Marin Headlands would still be visible with little obstruction. Although future development consistent with the housing element update would result in increased building heights and variability compared to the more uniform building heights under the 2050 environmental baseline, impacts on scenic vistas would not be substantial.

Ground-Level Views

Ground-level views include views of the city from the city's streets. Representative ground-level views of future development consistent with the housing element update compared to development under the 2050 environmental baseline are shown in Viewpoint 1 (Figure 4.1-2, p. 4.1-27), Viewpoint 3 (Figure 4.1-4, p. 4.1-29), Viewpoint 8 (Figure 4.1-9, p. 4.1-34), and Viewpoint 10 (Figure 4.1-11, p. 4.1-36). As discussed above, these viewpoints are not considered scenic vistas because they do not provide the viewer with an elevated vantage point of high-quality views to the surrounding landscape. However, ground-level views represent the pedestrian perspective of future development consistent with the housing element update in the context of height, form, bulk, and massing, and the representative ground-level views of future development.

Specific height, form, bulk, and massing related to future development consistent with the housing element would be required to comply with policies in the urban design element of the general plan (see "Regulatory Framework" above). Transit corridors in the northern and western portions of the city would experience noticeable building height increases under the 2050 environmental baseline, which would be intensified in the

west and north sides of the city by future development consistent with the housing element update. Future development consistent with the housing element update would alter ground-level views along the Van Ness corridor (Viewpoint 1), 19th Avenue (Viewpoint 8), and Geary Boulevard (Viewpoint 10) because development is anticipated to result in taller and more dense building massing in those areas compared to the 2050 environmental baseline. However, as shown by the simulated building massing in Viewpoints 1, 8, and 10, narrow distant views between the buildings would not change in width or quality between the 2050 environmental baseline and the proposed action. Similarly, future development consistent with the housing element update would not result in substantial changes to the long-range scenic view of the downtown area from U.S. 101. Future development consistent with the housing element update in the downtown area would not obstruct or change the overall form and appearance of the city skyline.

Overall, at ground level, the height differential of future development consistent with the housing element update would not represent a substantial change from the 2050 environmental baseline. In general, future development consistent with the housing element update would be consistent with the anticipated urban environment and nearby building heights under the 2050 environmental baseline. In addition, views through transit corridors would not be further obstructed as a result of future development consistent with the housing element update.

Conclusion

The housing element update seeks to change where housing growth would be concentrated in the city. Future development consistent with the housing element update would result in increased building heights in the west and north sides of the city and in less new development in the eastern side of the city compared to the 2050 environmental baseline. Although these changes would be noticeable from various scenic vistas, impacts on scenic vistas would not be substantial. Therefore, the impact of the housing element update on scenic vistas would be *less than significant*, and no mitigation measures are necessary.

Impact AE-2: The proposed action would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (*Less than Significant*)

As discussed under “Regulatory Framework,” above, there are no officially designated state scenic highways within the city. While there are no *officially* designated scenic roadways, I-280, SR 1, SR 35, and a portion of I-80 are *eligible* state scenic highways within the city. The 3.2-mile segment of I-80 that extends across the Bay Bridge is identified as an eligible state scenic highway. The Bay Bridge is a prominent regional and city landmark that is visible from numerous locations, and high-quality views of the northwestern portion of San Francisco are available to motorists traveling east on the bridge. While future city development consistent with the proposed action would be visible from these roadways, it would not result in a substantial change to the landscape such that scenic resources would be substantially damaged (see Impact AE-1).

San Francisco contains numerous scenic resources, including natural features such as Twin Peaks, Mount Sutro, Ocean Beach, San Francisco Bay, and the Golden Gate Strait, and built resources such as Coit Tower, the Painted Ladies, the Golden Gate and Bay bridges, Sutro Tower, the Ferry Building, and numerous historic landmarks and historic districts.

Future development consistent with the housing element would occur in the urban setting of San Francisco on infill properties surrounded by other urban development on properties zoned for residential uses, and not on sites containing natural features or built resources that can also be considered scenic resources. With the exception of the Painted Ladies, the natural and built resources listed above are not zoned for residential uses, and therefore, development under the proposed action would not impact those resources. Likewise, the proposed action would not damage natural features or built resources. Impacts on built resources that are historic landmarks or in historic districts are discussed in Section 4.2, Cultural Resources.

Additionally, new construction would be required to comply with the San Francisco Public Works Code, which establishes protections for the city's trees (additional analysis regarding the city's trees is included under "Biological Resources" in this section). This, and other policies in the planning code and general plan, would ensure that scenic resources would not be substantially damaged.

Conclusion

Because development would not occur on natural features but in the existing urban context of the city, future development consistent with the housing element update would not substantially damage scenic resources. Therefore, the impact would be *less than significant*, and no mitigation measures are necessary.

Impact AE-3: The proposed action would not conflict with applicable zoning and other regulations governing scenic quality. (*Less than Significant*)

The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. Adoption of the housing element update would not, in and of itself, authorize any changes in zoning or other land use regulations or approve any development. Therefore, the housing element update would not result in any direct physical changes or conflicts with applicable zoning and other regulations governing scenic quality. Physical effects that would result from future actions consistent with the housing element update are analyzed as secondary effects throughout this EIR.

The planning code and the city's zoning maps implement the general plan. The urban design element of the general plan contains policies pertaining to aesthetics that aim to preserve historic and culturally significant landscapes while protecting the natural landscape and views (urban design element Policies 1.1, 2.1, and 2.6) promote high-quality design that is attractive and respects and improves the visual character of surrounding land uses (urban design element policies 3.3 through 3.9), and promotes new development to harmonize with existing buildings in local decision-making (urban design element Policies 3.1 and 3.2). Proposed policy changes that could lead to different physical environmental effects than those anticipated under the existing 2014 housing element are discussed under "Proposed Goals, Policies, and Actions" in Chapter 2, Project Description.

Future development consistent with the proposed action would be required to comply with all applicable zoning and other regulations governing scenic quality. Future rezoning would be subject to independent CEQA review and new development consistent with the housing element update would be subject to policies in the general plan, governing area plans, applicable design guidelines, and planning codes. New development could

also be subject to other applicable land use plans to mitigate and prevent impacts on scenic quality. Therefore, the proposed action would not conflict with applicable zoning or other regulations governing scenic quality

Conclusion

For the reasons stated above, the proposed action would not conflict with applicable zoning and other regulation governing scenic quality, and this impact would be *less than significant*, and no mitigation measures are necessary.

Impact AE-4: The proposed action would not create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area. (*Less than Significant*)

Light and Glare

The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. Thus, future development consistent with the proposed action would generate additional nighttime lighting, particularly in the northern and western portions of the city, but the change is not anticipated to be substantial or adverse in the context of the 2050 environmental baseline lighting conditions in the city. New lighting would not be in excess of that which would be emitted by buildings in the 2050 environmental baseline, and could be expected to be incrementally reduced, on a per-building basis, with the requirements in the building code and green building code for energy conservation. Compliance with design guidelines and the planning code would also require the use of non-reflective glass, downward-directed and shielded outdoor lighting, and controlled illumination of outdoor signage. Therefore, future development consistent with the proposed action would not result in obtrusive light or glare that would adversely affect views or substantially affect other properties. Additionally, San Francisco Planning Commission Resolution 9212 generally prohibits the use of mirrored or reflective glass in new buildings. With adherence to the above policies, impacts related to glare of new development would be less than significant, and similar to the 2050 environmental baseline.

Nighttime Sky Brightness

The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. Future development consistent with the proposed action would result in reasonably foreseeable residential development and associated new or improved amenities, such as transit centers, playgrounds, recreation centers, and health clinics, or the development of additional commercial and retail uses that would generate additional lighting during hours of darkness in the future. However, this change would not be substantial compared to conditions under the 2050 environmental baseline because nighttime lighting from residential sources and associated amenities represents a small contribution to nighttime sky brightness compared to other sources of urban lighting such as streetlights, illuminated advertising signage, illuminated sporting venues, and other outdoor area lighting. Recent changes in

the building code and green building code require energy conservation, while design guidelines and the planning code require the use of downward-directed, shielded outdoor lighting, and limits the illumination of outdoor signs. Consequently, the effect of new or renovated development consistent with these codes has contributed to the total average nighttime radiance over San Francisco steadily declining since 2013²¹ despite the addition of over 28,000 new housing units between 2013 and 2020 (see **Table 2-2**, p. 2-16, in Chapter 2).

It is assumed that the current downward trend in nighttime light radiance would plateau as the standards and policies driving these changes become more fully implemented. However, development consistent with the proposed action would likely result in further reduction in nighttime light radiance on a per-unit basis as new housing would replace older developments built prior to the current requirements. Even where existing lower-density development is replaced with higher-density housing and associated amenities, the increase in exterior lighting would not rise proportionally to the number of units. Light radiance attributable to building entries, signage and other exterior common areas would be similar regardless of the number of residential units and nearby amenities.

Light trespass from interior lighting sources associated with development consistent with the proposed action would also contribute to light pollution, and light from taller buildings would be more visible and prominent when seen from elevated viewpoints. However, the overall contribution towards elevated nighttime brightness in areas of more concentrated growth would not be substantial. For example, while new development consistent with the proposed action would individually and collectively contribute to light pollution, the amount of interior light from a typical unit would represent less than 15 percent of the light emitted from a typical streetlight. Furthermore, most residences have window coverings for privacy that limit the amount of light trespass and most residential lighting is typically turned off during sleeping hours, limiting the duration of impact compared to other sources that remain on throughout nighttime hours.

The highest radiance values would be concentrated in the Downtown, South of Market, the Financial District, Chinatown, and North Beach planning districts, and Port of San Francisco properties, with lower radiance values in the west and southern portions of the city, similar to historical and 2050 environmental baseline conditions. With future development consistent with the proposed action, some variance in the location of nighttime sky brightness can be observed due to the relative location and density of new development, specifically modest increases in nighttime brightness along transit corridors such as Van Ness Avenue, Geary Boulevard, 19th Avenue, and Sunset Boulevard; however, the overall pattern of light radiance of the 2050 environmental baseline and proposed action, as well as their average radiance values across the city, are substantially similar. As shown by the nighttime visual simulations (**Figures 4.1-13** through **4.1-16**, pp. 4.1-40 through 4.1-43), the net change in nighttime sky brightness due to future development consistent with the housing element update compared to the 2050 environmental baseline would be minimal.

Conclusion

With adherence to the planning and building codes and San Francisco Planning Commission Resolution 9212, impacts of future development consistent with the housing element update on light and glare would be *less*

²¹ Radiance Light Trends, Light Pollution Map, [https://lighttrends.lightpollutionmap.info.](https://lighttrends.lightpollutionmap.info/), accessed December 2021.

than significant, and no mitigation measures are necessary. Similarly, effects on nighttime sky brightness would be *less than significant*, and no mitigation measures are necessary.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-AE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative aesthetic impact. (*Less than Significant*)

In general, aesthetics impacts from cumulative projects would result from the construction of new buildings. BART's Second Transbay Tube Project and Increased Caltrain Service and Pennsylvania Avenue Extension would involve the construction of transportation infrastructure. Consistent with current urban design practice in San Francisco, these projects would not alter the built environment or create additional light and glare. Downtown Congestion Pricing is a program and would not include the construction of any aboveground structures. The routine maintenance of infrastructure would involve the repair and replacement of existing structures and would not include the construction of any new aboveground features. The only aboveground structures that may be constructed would be ventilation shafts for BART's Second Transbay Tube Project and Increased Caltrain Service and Pennsylvania Avenue Extension; the ventilation shafts would be of minimal heights and not anticipated to alter the built environment or create additional light and glare.

Future development consistent with the Waterfront Plan Update may result in additional development on Port-owned parcels located between Fort Mason and Islais Creek. Sites identified for potential future development under the Waterfront Plan Update would not result in substantial changes in building height that would alter the built environment or create additional light and glare, except for Seawall Lot 330, which could be developed with an approximately 105-foot-tall building. Future development of Seawall Lot 330, consistent with the Port's Waterfront Plan Update, would not be expected to combine with future development consistent with the proposed action and alter the built environment or create additional light and glare because any new development in the city would be subject to the policies in the general plan, governing area plans, design guidelines, and planning codes. As such, the housing element update would not combine with cumulative projects to result in a significant cumulative aesthetics impact. For these reasons, the housing element update, in combination with cumulative

projects, would not result in a significant cumulative aesthetics impact, and this cumulative impact would be *less than significant*.

Population and Housing

This section of the EIR analyzes potential population and housing impacts that would occur as a result of the proposed action as well as cumulative conditions. The analysis assesses the potential for implementation of the proposed action to result in reasonably foreseeable impacts related to substantial unplanned growth or the displacement of substantial numbers of people or housing units, necessitating the construction of replacement housing elsewhere. These impacts would occur as a result of future actions that implement the goals, policies, and actions of the proposed housing element update (i.e., future development consistent with the proposed action).

This section discusses the environmental setting, regulatory framework, environmental impacts, and mitigation measures for population and housing.

ENVIRONMENTAL SETTING²²

Population

Global Population

At the global level, human population growth is the result of the net difference between the birth rate and the death rate, which is also known as “natural growth.” In 1950, world population was estimated to be around 2.6 billion. The population increased to 5 billion in 1987 and 6 billion in 1999. In October 2011, the global population was estimated to be 7 billion. The population is expected to increase by 2 billion over the next 30 years, increasing from the current 7.7 billion to 9.7 billion in 2050, with a possible population of nearly 11 billion around 2100.²³ This dramatic growth has been driven largely by increasing numbers of people surviving to reproductive age, along with major changes in fertility rates.

Local Population

At the national, state, and local level, population change is the result of the combination of natural growth and migration. Demographers further break migration down into domestic and international migration. California is the most populous state in the United States, with a 2020 population of 39,538,223. The 2020 California population had increased by 6.1 percent since 2010, but at a slower rate than in the previous decade, which saw a 10 percent gain.²⁴ Historically, population growth in California, including San Francisco, has been driven by both natural growth and migration, as described below. **Table 4.1-4** provides the natural increase, net international migration, and the net domestic migration number for California and for San Francisco from 1991 to 2021. Natural increase is the numerical difference between the number of births and the number of deaths within in a certain period of time. Net domestic migration refers to the net number of people leaving or moving

²² For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

²³ United Nations, *Global Issues: Population*, n.d., <https://www.un.org/en/global-issues/population>, accessed December 17, 2021.

²⁴ U.S. Census Bureau, *California: 2020 Census*, 2021, <https://www.census.gov/library/stories/state-by-state/california-population-change-between-census-decade.html>, accessed December 20, 2021.

to California and San Francisco from elsewhere in the United States. Net international migration refers to the net number of people leaving or moving to California and San Francisco from outside the United States. As shown in the table below, during the past two decades, natural growth and net international migration were positive while net domestic migration was negative for both California and San Francisco. Although more people have relocated from California and San Francisco to other U.S. states during this period, this net negative domestic migration has been outweighed by both net positive natural growth and net positive international migration. Thus, population growth over the past two decades in both California and San Francisco is the result of natural growth and international migration.

Table 4.1-4: California and San Francisco Population Change 1991–2021

	1991 ^a	1995 ^a	2000 ^b	2005 ^b	2010 ^b	2015 ^c	2020 ^c	2021 ^c
California								
Natural Increase	396,893	337,282	297,512	316,083	287,622	246,923	157,000	76,066
Net International Migration	214,529	174,198	224,840	137,728	122,991	145,601	76,990	27,424
Net Domestic Migration	18,695	-323,321	154,279	-220,994	-169,336	-123,819	-221,770	-276,663
Total Population	30,458,613	31,711,849	34,095,209	35,985,582	37,318,481	38,913,507	39,541,786	39,368,613
San Francisco								
Natural Increase	1,784	978	1,929	2,697	3,088	3,470	2,464	1,301
Net International Migration	10,790	6,816	9,168	8,638	6,691	6,120	2,251	802
Net Domestic Migration	-9,892	-11,274	3,599	-12,379	-4,401	-1,009	-5,935	-17,538
Total Population	725,869	739,863	781,167	779,655	807,177	857,037	870,985	855,550

Source:

- ^a California Department of Finance, E-6 County Population Estimates and Components of Change — July 1, 1990-2000, <https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-6/1990-2000/>
- ^b California Department of Finance, E-6. Population Estimates and Components of Change by County — July 1, 2000–2010, <https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-6/2000-10/>
- ^c California Department of Finance, E-6. Population Estimates and Components of Change by County—July 1, 2010–2021, <https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-6/>

The text below provides an abbreviated history of population and growth in California and San Francisco. Refer to Section 4.2, Cultural Resources, for additional information regarding the historic period in San Francisco.

San Francisco was traditionally inhabited by the Yelamu people,²⁵ a subgroup of the Ramaytush language-speaking group of the Ohlone people. In 1776, Juan de Bautista de Anza led a party that traveled from Monterey to San Francisco to select Spanish settlement locations—specifically, a site for a military base at Fort Point and a mission site at Arroyo de los Dolores. Spanish colonization translated into dramatic social upheaval and a demographic decline for the region’s native Ohlone inhabitants. The Spanish period ended in 1821/1822 when the government of Mexico gained independence from Spain and acquired current-day California. Fueled by anti-

²⁵ Milliken, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA, Ballena Press, 1995, p. 260.

clerical sentiment, the Mexican government began secularizing the California missions in the 1830s. With secularization of the missions in the 1830s, a new class of Hispanic rancho landowners exploited the labor of Native Americans who were released from the forced labor of the Franciscan missions. The bayside village of Yerba Buena, a multicultural settlement of immigrants and small-scale harbor facilities along the shores of Yerba Buena Cove in what is now San Francisco's Downtown, grew slowly during the 1830s and early 1840s. In 1848, following the Mexican-American War, Mexico ceded the territories of Texas and California to the United States.

The 1848 discovery of gold in the American River set off the California Gold Rush and quickly changed San Francisco. The city's port was an access point to the goldfields. Businesses that supported gold mining, including banking, food processing, and dry goods trading, began to establish themselves. The area formerly known as Yerba Buena began its shift into an ever-expanding metropolis, resulting in early residential growth. In 1860, the city's population was approximately 57,000, which increased to approximately 150,000 by 1870²⁶ ²⁷, making San Francisco the tenth-largest city in the United States. In addition, it claimed the largest proportion of foreign-born residents of the 50 largest cities in the country. By 1890, the population of San Francisco had grown to 298,997.²⁸ The population continued to expand throughout the decade, totaling 342,782 by 1900.²⁹

San Francisco continued to see population growth in the first half of the 20th century, climbing from 416,912 in 1910 to 634,394 in 1930. In the early 1940s, following the end of the Great Depression and U.S. entry into World War II, San Francisco's population dramatically increased as workers poured into the Bay Area, seeking jobs in the region's many factories, shipyards, and other defense-related production facilities. In 1940, the population of the city was 95 percent White and 5 percent non-White, with the majority of foreign-born residents coming from Germany (11.5 percent) and Italy (18.5 percent).³⁰ At the time, the Black population of San Francisco was approximately 0.8 percent. This began to change between 1940 and 1946 when Blacks migrated to western cities in unprecedented numbers to work in the wartime defense industries. Black migrants to San Francisco tended to come from Louisiana, Texas, and Oklahoma, giving the city's Black community a distinctly southern aspect. Racist policies excluded Black migrants from living in most neighborhoods and Black migrants settled in established Black neighborhoods, like the Western Addition and Hunters Point. By 1946, San Francisco's Black population had increased by 600 percent.³¹

The city's 1940 population of 634,536 continued to grow after the conclusion of World War II in 1945. Many war workers elected to stay in the city and were joined by returning service members who settled in the Bay Area after the war. By 1950, the city's population increased to 775,357, and was 74 percent White, 3.2 percent Chinese, and 5.6 percent Black. San Francisco's Mexican-born population had increased only moderately in the 1930s and 1940s, while immigration from Central and South America, particularly El Salvador and Nicaragua, more than

²⁶ John S. Hittell, *A History of the City of San Francisco and Incidentally the State of California*, San Francisco: L. Bancroft & Company, 1878, 366, 429.

²⁷ Mel Scott, *The San Francisco Bay Area: A Metropolis in Perspective*. Berkeley: University of California Press, 1985, 50-51.

²⁸ Bay Area Census, *San Francisco City and County, 1940*, <http://www.bayareacensus.ca.gov/counties/SanFranciscoCounty40.htm>, accessed December 27, 2021.

²⁹ Ibid.

³⁰ Ibid.

³¹ Broussard, Albert S., Strange Territory, Familiar Leadership: The Impact of World War II on San Francisco's Black Community. In *California History*, 65(1):18-25, 1986.

doubled and, by 1950, outnumbered the Mexican-born population in the city.³² By 1960, San Francisco had a population of 740,316 (81 percent White, 10 percent Black, 4.9 percent Chinese), with approximately 19.3 percent being foreign-born residents.³³ By 1970, San Francisco's population was 715,674 (71.4 percent White, 8.2 percent Chinese, 13.4 percent Black, 3.5 percent Filipino, and 1.6 percent Japanese). Persons of Spanish origin or descent accounted for 9.7 percent of the population.³⁴ The 1970s also witnessed increased immigration from Central America as refugees from Nicaragua and El Salvador moved to the city.³⁵

The decades following the 1980s saw the White population and the Black population of the city decline, while the Asian population and Hispanic population continued to grow, along with the overall population of the city. By 2010, the population of the city had reached 805,235. The Black population had declined from 13.4 percent in 1970 to about 6.1 percent in 2010. The White population also declined to 48.5 percent. The Asian population rose to 33.3 percent, and the Hispanic or Latino population rose to 15.1 percent.

Between 2010 and 2016 San Francisco experienced a massive out-migration of low-income and working-class residents, which disproportionately affected Hispanic and Black residents.³⁶ Many low- and moderate-income residents who left the city moved to the Sacramento region and the Central Valley. Higher-income residents who left the city tended to move to other large metropolitan areas in other parts of the country. For every person in the top income category (annual household income of \$200,000 or more) who left the Bay Area between 2010 and 2016, six moderate-income residents (annual household income of \$100,000 or less) moved out.³⁷

Although California's net domestic migration has been negative for many years, one December 2021 study suggests that the COVID-19 pandemic exacerbated this trend, especially in San Francisco, San Mateo, and Santa Clara counties. A study by the California Policy Lab³⁸ shows that, since the start of the pandemic in March 2020, the number of individuals who move to California has decreased by 38 percent overall. The numbers have decreased in every county in California as well. At the same time, exits from California to other states have increased by 12 percent. The San Francisco Bay Area saw a larger share of residents, compared with pre-pandemic numbers, move out of state, with San Francisco, San Mateo, and Santa Clara counties all losing residents to domestic migration for the first time since 2016.³⁹ The study identifies limitations of its findings; these include the use of quarterly credit records, which do not include the one in 10 adults without a credit record, along with younger adults, children, and many lower-income consumers. The data set also does not include international migration, which was cut off during the pandemic but normally accounts for a large portion

³² Godfrey, B.J., *Ethnic Identities and Ethnic Enclaves: The Morphogenesis of San Francisco's Hispanic "Barrio,"* in *Yearbook of the Conference of Latin American Geographers*, 11:45–53, 1985.

³³ Bay Area Census, *San Francisco City and County, 1940*, <http://www.bayareacensus.ca.gov/counties/SanFranciscoCounty40.htm>, accessed December 27, 2021.

³⁴ Ibid.

³⁵ Godfrey, B.J., *Ethnic Identities and Ethnic Enclaves: The Morphogenesis of San Francisco's Hispanic "Barrio,"* in *Yearbook of the Conference of Latin American Geographers*, 11:45–53, 1985.

³⁶ Romem, I., and E. Kneebone, *Terner Center for Housing Innovation at UC Berkeley, Disparity in Departure: Who Leaves the Bay Area And Where Do They Go?* 2018.

³⁷ Ibid.

³⁸ Holmes and White. California Policy Lab, December 2021, *Pandemic Patterns: California is Seeing Fewer Entrances and More Exits*, <https://www.capolitylab.org/wp-content/uploads/2021/12/Pandemic-Patterns.-California-is-Seeing-Fewer-Entrances-and-More-Exits.pdf>.

³⁹ Ibid.

of the Bay Area's population. In addition, the data set covers only six years, which is one economic cycle. The study therefore may not be representative of larger trends, particularly with the pandemic that began in March 2020 and upended predictable migration patterns and resulted in a brief change that is not expected to continue. Furthermore, the study does not account for those in the Bay Area whose work-from-home status allowed them to relocate elsewhere temporarily. In short, although the 2021 study is cited for informational purposes, it is too preliminary and unrepresentative to be reflected in this analysis, nor is it considered within the framework of the housing element's overall objective, which is to increase housing supply and affordability.

Notwithstanding recent isolated trends, population in the city continue to increase. According to the U.S. Census Bureau, in 2020, San Francisco had an estimated population of approximately 873,965. In May 2021, the Department of Finance estimated that the population of San Francisco was 875,010.⁴⁰

Housing

Housing Supply

Table 4.1-5 presents data regarding population and housing trends from 1950 to 2020, based on census data. As shown, in 2020, there were 14,366,336 housing units in the state and 406,413 housing units in the city. The 2020 San Francisco Housing Inventory (published April 2021) reports that there were 403,357 housing units in the city.⁴¹ Census data and the San Francisco Housing Inventory rely on different data sources resulting in differences between the number of housing units. It is expected that residential development in the city will continue to occur in the future. State law housing law requires cities and counties in California to plan for the development of, and make land available for, new housing needed to accommodate projected population growth at various income levels.

⁴⁰ California Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011–2021, with 2010 Census Benchmark*, 2021, <https://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/>, accessed September 22, 2021.

⁴¹ San Francisco Planning Department, *2020 San Francisco Housing Inventory*, April 2021, https://sfplanning.org/sites/default/files/documents/reports/2020_Housing_Inventory.pdf, accessed December 2022.

Table 4.1-5: California and San Francisco Population and Housing Trends, 1950–2020

	1950	1960	1970	1980	1990	2000	2010	2020
California								
Population	10,586,223 ^a	15,717,204 ^a (+48.5%)	19,971,069 ^a (+27.1%)	23,667,764 ^a (+18.5%)	29,760,021 ^a (+25.7%)	33,871,648 ^a (+13.8%)	37,253,956 ^a (+10.0%)	39,237,836 ^b (+5.3%)
Total Housing Units	3,609,000 ^c	5,465,870 ^d (+51.5%)	7,000,174 ^d (+28.1%)	9,279,04 ^d (+32.6%)	11,182,513 ^d (+20.5%)	12,214,549 ^d (+9.2%)	13,680,081 ^d (+12.0%)	14,366,336 ^e (+5.0%)
San Francisco								
Population	775,357 ^f	740,316 ^f (-4.5%)	715,674 ^f (-3.3%)	678,974 ^f (-5.1%)	723,959 ^f (+6.6%)	776,733 ^f (+7.3%)	805,235 ^f (+3.7%)	873,965 ^g (+8.5%)
Total Housing Units	265,726 ^h	310,559 ^h (+16.9%)	310,402 ^h (-0.1%)	316,608 ^h (+2.0%)	328,471 ^h (+3.7%)	346,527 ^h (+5.5%)	376,942 ^h (+8.8%)	406,413 (2019) ⁱ (+7.8%)

Note: Percentages identified in the table represent change from prior decade.

Source:

- ^a Bay Area Census, *California*, 2010, <http://www.bayareacensus.ca.gov/california.htm>, accessed December 29, 2021.
- ^b U.S. Census Bureau, *California: Population Estimates*, July 1, 2021 (V2021), <https://www.census.gov/quickfacts/fact/table/sanfranciscocountycalifornia/PST045221>, accessed December 29, 2020.
- ^c U.S. Census Bureau, *1950 Census of Housing: Dwelling Units in California*, April 1, 1950, <https://www.census.gov/library/publications/1950/dec/hc-1.html>, accessed December 29, 2020.
- ^d U.S. Census Bureau, *California: 2000 Population and Housing Unit Counts*, issued August 2003.
- ^e U.S. Census Bureau, *California: Population Estimates*, July 1, 2021 (V2021), <https://www.census.gov/quickfacts/fact/table/sanfranciscocountycalifornia/PST045221>, accessed December 29, 2020.
- ^f Bay Area Census, *San Francisco City and County*, <http://www.bayareacensus.ca.gov/counties/SanFranciscoCounty50.htm>, accessed December 27, 2021.
- ^g U.S. Census Bureau, *San Francisco County California: Population Estimates*, July 1, 2021 (V2021), <https://www.census.gov/quickfacts/sanfranciscocountycalifornia>, accessed December 29, 2020.
- ^h Bay Area Census, *San Francisco City and County*, <http://www.bayareacensus.ca.gov/counties/SanFranciscoCounty50.htm>, accessed December 27, 2021.
- ⁱ U.S. Census Bureau, *California: Population Estimates*, July 1, 2021 (V2021), <https://www.census.gov/quickfacts/fact/table/sanfranciscocountycalifornia/PST045221>, accessed December 29, 2020.

Housing Stock

Table 4.1-6 provides housing unit totals by planning district as well as housing characteristics. Although housing is generally permitted in all districts of the city, the existing housing stock can be characterized as having the highest densities and highest height limits in the downtown area, with lower densities and lower height limits in the western and southern planning districts. The Northeast and Richmond planning districts had the highest number of overall units as of 2020. The South Central, Outer Sunset, and Ingleside planning districts had the highest number of single-family homes; combined, they account for approximately 46 percent of the city’s single-family homes. The Downtown planning district had the largest stock of high-density housing (i.e., 10 or more units) in the city, accounting for 24 percent of all high-density housing citywide. The South of Market planning district followed closely, with 78 percent of its residential units in buildings with 20 units or more, accounting for 24 percent of the city’s high-density housing.

Table 4.1-6: San Francisco Housing Unit Characteristics by Planning District in 2020

Planning District	Single-Family Units	2-4 Units	5-9 Units	10-19 Units	20+ Units	District Total Units	Percent of Citywide Total Units
Bernal Heights	5,951	2,834	537	130	200	9,693	2.4%
Buena Vista	2,777	6,707	3,374	2,120	3,127	18,145	4.5%
Central	10,239	8,779	2,966	2,422	2,343	26,754	6.63%
Downtown	550	730	510	2,542	29,834	34,327	8.5%
Ingleside	16,606	1,732	606	920	5,106	24,994	6.2%
Inner Sunset	10,462	4,605	1,560	1,244	1,195	19,070	4.7%
Marina	3,470	5,671	3,836	7,431	6,150	26,573	6.6%
Mission	6,303	7,166	3,865	3,396	6,311	27,063	6.7%
Northeast	2,080	7,685	6,201	6,626	18,688	41,344	10.2%
Outer Sunset	19,321	4,821	1,386	448	543	26,553	6.6%
Presidio, Treasure Island, and Golden Gate Park	852	687	532	34	89	2,194	0.5%
Richmond	11,380	15,696	5,194	3,876	1,582	37,760	9.4%
South of Market	2,386	2,996	1,246	1,509	29,394	37,575	9.3%
South Bayshore	7,683	1,579	682	536	2,561	13,113	3.3%
South Central	21,614	3,039	794	583	1,115	27,157	6.73%
Western Addition	2,536	6,141	4,094	4,451	13,823	31,045	7.7%
Total	124,210	80,868	37,383	38,265	122,061	403,357	100%

Source: San Francisco Planning Department, 2020 *San Francisco Housing Inventory*, 2021, pages 43–45.

The number of housing units constructed in the city each year between 2001 and 2020 is shown in Chapter 2, Project Description, in **Table 2-2**, p. 2-16. In 2020, there was a net gain in the city’s housing stock (i.e., 4,044 additional housing units), with approximately 820 of the new units being affordable, or about 20 percent of the total.⁴² Affordable units include 100 percent affordable units, inclusionary units, and units built as accessory dwelling units. As of December 2020, units in buildings with 20 or more units composed approximately 30 percent of the city’s total housing stock.

Table 4.1-7 shows the net new housing units constructed between 2001 and 2020. According to the 2020 San Francisco Housing Inventory, the net increase in the number of housing units added to the city’s inventory was approximately 53,300. Of all housing units added since 2010, about 93 percent have been in buildings with 20 or more housing units.

Table 4.1-7: Net New Housing Units Built in San Francisco (2001-2020)

Year	Net New Housing Units
2001	1,799
2002	2,408
2003	2,496
2004	1,487
2005	1,855
2006	1,914
2007	2,567
2008	3,263
2009	3,454
2010	1,230
2011	269
2012	1,317
2013	1,960
2014	3,514
2015	2,954
2016	5,046
2017	4,441
2018	2,579
2019	4,698
2020	4,044

Source: San Francisco Planning Department, *2020 San Francisco Housing Inventory*, 2021, page 6.

⁴² San Francisco Planning Department, *2020 San Francisco Housing Inventory*, 2021, https://sfplanning.org/sites/default/files/documents/reports/2020_Housing_Inventory.pdf, accessed December 21, 2021.

Housing units in San Francisco are generally smaller in size than those in the surrounding suburbs. The 2000 census showed that 76 percent of all residential units had two bedrooms or less and that more than 53 percent of San Francisco's housing stock was built prior to 1940. The 2020 census showed that 70.4 percent of all residential units had two bedrooms or less and that more than 46 percent of San Francisco's housing stock was built prior to 1939.⁴³

Housing Equity and Affordability

According to U.S. census data,⁴⁴ the median household income in San Francisco in 2019 was \$123,859, while median per capita income was \$75,084. Approximately 9.5 percent of the San Francisco population lived at or below the poverty level in 2015–2019.⁴⁵ Of the city's residents over age 25, 58.1 percent held a bachelor's degree; 88.5 percent held a high school degree or higher as of 2015–2019. With respect to employment, 71.7 percent of the population above age 16 was in the civilian labor force. Data show that median and mean family incomes tend to be higher than those of non-family households. In addition, disparities exist between home-owning households and renters as well as among ethnic groups. The array of incomes, as well as household types, affects housing demand and affordability. For example, the average rent for a two-bedroom apartment in San Francisco in 2020 was \$3,570.⁴⁶ This means that an individual earning the median per capita income of \$75,084 is unlikely to afford the average rent for a two-bedroom apartment in 2021. Although median household income of \$123,859 is somewhat higher than median individual income, the former is spread among more people, meaning a larger unit is needed to accommodate a family-size household.

Projected Growth for San Francisco

2050 Environmental Baseline Conditions

Table 4.1-8 presents the department's projections under the existing 2014 housing element (2050 environmental baseline) for housing units between 2020 and 2050.⁴⁷ The projections indicate that, under the 2050 environmental baseline, there would be approximately 509,000 total housing units and 882,000 total jobs in the city, or approximately 102,000 additional housing units and 111,000 additional jobs compared to 2020.

⁴³ United States Census Bureau. 2020. Comparative Housing Characteristics. 2020: ACS 5-Year Estimates Comparison Profiles. San Francisco County, California, <https://data.census.gov/cedsci/table?q=San%20Francisco%20County,%20California%20Housing&d=ACS%205-Year%20Estimates%20Comparison%20Profiles&tid=ACSCP5Y2020.CP04>, accessed March 29, 2022

⁴⁴ U.S. Census Bureau, *American Community Survey*, 2019, <https://www.census.gov/programs-surveys/acs/>, accessed October 21, 2021.

⁴⁵ U.S. Census Bureau, *Quick Facts*, San Francisco County, 2019, <https://www.census.gov/quickfacts/fact/table/sanfranciscocountycalifornia/EDU685219>, accessed September 24, 2021.

⁴⁶ San Francisco Planning Department, *2020 San Francisco Housing Inventory*, 2021.

⁴⁷ Fehr & Peers, *San Francisco Housing Element 2022 Update, Transportation Model Results*, 2021, prepared for San Francisco Planning Department.

Table 4.1-8: San Francisco Housing Unit and Job Projections Under 2020 Conditions and 2050 Environmental Baseline

	2020 Conditions	2050 Environmental Baseline
Housing Units	407,000	509,000
Jobs	771,000	882,000

Source: San Francisco Planning Department, 2021.

Plan Bay Area 2050

Plan Bay Area 2050 is the Bay Area’s Sustainable Communities Strategy, as prepared by Association of Bay Area Governments and Metropolitan Transportation Commission. Plan Bay Area 2050 includes eight goals, ranging from climate protection to economic vitality, with the overarching goal of increasing the capacity for jobs and housing in the San Francisco Bay Area to meet growth forecasts identified in the plan. Plan Bay Area 2050 forecasts approximately 578,000 households⁴⁸ in San Francisco by 2050 and includes policies aimed at concentrating this future growth in priority development areas, the overall purpose of which is to reduce dependence on the automobile as well as greenhouse gas (GHG) emissions. Every two years, the Association of Bay Area Governments and the Metropolitan Transportation Commission make long-term forecasts regarding population, housing, and employment in the Bay Area. The forecasts are designed to be realistic assessments of growth in the region. However, Plan Bay Area’s projections for the city of San Francisco have historically been higher than actual growth. For example, Plan Bay Area 2040 (adopted in 2017) projected that San Francisco’s population would grow by approximately 124,500 persons⁴⁹ from 2010 to 2020, whereas actual population growth for that period was 68,730 persons according to the U.S. Census.^{50,51}

Table 4.1-9 shows Plan Bay Area 2050 population and housing projections for the city for 2035 and 2050. According to Plan Bay Area 2050 projections, San Francisco is expected to have a population of approximately 1,145,000 by 2035 (i.e., 2035 midpoint conditions) and approximately 1,407,000 by 2050. The city is expected to have approximately 485,000 housing units by 2035 and approximately 596,000 housing units by 2050.

⁴⁸ The terms *households* and *housing units* are not equivalent. “Housing units” refers to the total number of actual dwelling units, whereas “households” refers to dwelling units that are occupied. While Plan Bay Area 2050 forecasts growth in households, the department measures and plans for housing production in housing units.

⁴⁹ Metropolitan Transportation Commission, Association of Bay Area Governments, Plan Bay Area 2040 Projections 2040. <http://projections.planbayarea.org/>, accessed March 17, 2022.

⁵⁰ Metropolitan Transportation Commission, Association of Bay Area Governments, *Plan Bay Area 2040*, final, July 26, 2017. http://2040.planbayarea.org/files/2020-02/Final_Plan_Bay_Area_2040.pdf, accessed February 2, 2022.

⁵¹ Bay Area Census, *California*, 2010, <http://www.bayareacensus.ca.gov/california.htm>, accessed December 29, 2021; Bay Area Census, *San Francisco City and County*, <http://www.bayareacensus.ca.gov/counties/SanFranciscoCounty50.htm>, accessed December 27, 2021.

Table 4.1-9: San Francisco Population and Housing Projections, Based on Plan Bay Area 2050 (2035 and 2050)

	2035	2050
Population	1,144,600 ^a	1,406,560 ^a
Households	470,679 ^a	578,000 ^b
Employment (jobs)	799,000 ^a	918,000 ^{a,b}

^a Source: SF CHAMP data (Fehr & Peers, 2021).

^b Source: *Plan Bay Area 2050, Forecasting and Modeling Report, Appendix 1, October 2021*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_Forecasting_Modeling_Report_October_2021.pdf.

Plan Bay Area 2050 also includes employment growth projections, as employment growth directly affects the demand for housing because jobs attract residents. As shown in **Table 4.1-9**, according to Plan Bay Area 2050 projections, San Francisco is expected to have approximately 799,000 jobs by 2035 (i.e., 2035 midpoint conditions) and approximately 888,000 jobs by 2050.

The distribution of employment is related to the location of housing. According to Plan Bay Area 2050, addressing the jobs-to-housing imbalance within the region would improve economic mobility for all residents. The jobs-to-housing imbalance refers to the current distribution of jobs and housing in the Bay Area. San Francisco has many more jobs than homes; as a result, workers must commute into San Francisco each day to reach their jobs. The jobs/housing ratio in San Francisco was 1.8 jobs per home in 2015, according to Plan Bay Area 2050. In 2050, Association of Bay Area Governments expects the regional jobs/housing ratio to decrease to 1.3 jobs per home from the existing 1.5 jobs per home⁵² This trend is decades in the making, a result of land use policies that focused on local needs and a transportation system that expanded just enough to meet increased peak-period demand. It is also a product of the power of economic agglomeration, with like industries locating together (e.g., information sector jobs cluster in the West Bay and South Bay). The plan supports a more balanced distribution of housing and jobs throughout the Bay Area by promoting more dense growth near transit and incentivizing employers to locate jobs near homes and transit. Plan Bay Area 2050 notes that the placement of affordable housing close to transit could provide low-income individuals with an opportunity to benefit from transit access while reducing climate emissions from cars on the road, serving both environmental and equity goals. For the many jobs in communities that are not located near transit, however, housing production near jobs could enable shorter commutes allows the region to reach climate goals, even if people still have to drive.

REGULATORY FRAMEWORK

Federal

Federal Uniform Relocation Act

The Federal Uniform Relocation Act requires comparable, decent, safe, and sanitary replacement housing that is within a person’s financial means to be made available before any person is displaced from a property or

⁵² Association of Bay Area Governments and Metropolitan Transportation Commission, *Plan Bay Area 2050, The Final Blue Print, Outcomes and Growth Pattern, 2020 and 2021, PowerPoint presentation*, <https://planbayarea.org>, accessed January 5, 2022.

program that is federally funded or assisted. To the maximum extent practicable, the new housing should be of the tenant's choice and provided, in compliance with applicable federal and state laws, on a nondiscriminatory basis, without regard to race, color, religion (creed), national origin, handicap, age, or sex.

State

Government Code Sections 65580–65590 (Housing Element Legal Requirements)

Refer to “Housing Element Background” in Chapter 2, Project Description, for a discussion of state-mandated housing element requirements.

Housing Development and Housing 2019–20 Budget Act

The Housing Development and Housing 2019–20 Budget Act requires local governments to provide, "by right," CEQA-exempt approvals to certain qualifying navigation centers that move homeless Californians into permanent housing. Signed into law by Governor Newsom on July 31, 2019, the act also creates additional incentives for cities to comply with mandates to plan for adequate housing in their housing elements and provides additional remedies that the state can use in court when cities fail to comply with housing element law.

Housing Crisis Act of 2019

The Housing Crisis Act of 2019, signed into law October 9, 2019, tightens the protections for development projects under the Housing Accountability Act by limiting a jurisdiction's ability to change development standards and zoning applicable to a project once a preliminary application is submitted, and reduces the amount of time a city has to review and approve residential projects. The Housing Crisis Act of 2019 also limits cities' ability to reduce zoned capacity for residential development below that which existed on January 1, 2018; limits the number of hearings allowed for code-complying housing projects to five; requires any new residential design standards be objective; and requires new residential projects to replace any demolished units on a one for one basis. Effective January 1, 2022, the provisions of the Housing Crisis Act of 2019 were extended beyond the original sunset date of 2025 through 2030.

California Housing Opportunity and More Efficiency (HOME) Act⁵³

The California HOME Act (amending Government Code section 66452.6 and adding sections 65852.21 and 66411.7) requires the ministerial approval of two units on parcels zoned for single-family housing. This law also requires ministerial approval of the subdivision of certain single-family lots into two parcels. The California HOME Act requires a proposed housing development containing no more than two residential units within a single-family residential zone to be considered ministerially, without discretionary review or hearing, if the proposed housing development meets certain requirements, including, but not limited to, that the proposed housing development would not require demolition or alteration of housing that is subject to a recorded covenant, ordinance, or law that restricts rents to levels affordable to persons and families of moderate, low, or very low

⁵³ At the time this EIR was being prepared, several ordinances implementing the California HOME Act in San Francisco were pending before the board of supervisors. Should one or more of those ordinances be adopted, the EIR will be updated accordingly in the responses to comments on the draft EIR document. The department does not expect adoption of one or more of those ordinances to affect the analysis in this EIR, as implementation the California HOME Act would likely reduce the difference in housing production levels anticipated under the 2050 environmental baseline and the proposed action.

income, that the proposed housing development does not allow for the demolition of more than 25 percent of the existing exterior structural walls, except as provided, and that the development is not located within a historic district, is not included on the State Historic Resources Inventory, or is not within a site that is legally designated or listed as a city or county landmark or historic property or district.

Planning and Zoning Law Changes

The provisions in Government Code section 65913.5 allow cities to upzone parcels located in “transit-rich areas” for up to 10 residential units. Under this law, the adoption of this type of upzoning is a ministerial action and would therefore not be subject to the requirements of CEQA. Parcels on a fixed-route bus line that meet certain service-interval requirements or are within 0.5 mile of a major transit stop would qualify.

Regional

San Francisco Bay Area Housing Need Plan, 2023 to 2031

As described in Chapter 2, Project Description, the Regional Housing Needs Assessment (RHNA) is part of a state mandate to address the need for housing throughout the state. As part of the RHNA, the state requires each jurisdiction to plan for its share of the region’s housing need, including the needs of people from all income categories. The Bay Area’s regional housing need is specified by the California Department of Housing and Community Development (HCD). The Association of Bay Area Governments and the Metropolitan Transportation Commission then allocate a portion of the regional need, for all income groups, to each Bay Area city and county. The jurisdictions must then plan for that need in their local housing elements, which eventually must be certified by HCD. The RHNA process does not encourage or promote growth but, rather, requires communities to plan for projected growth so that they can grow in ways that enhance the quality of life; improve access to jobs, transportation, and housing; and avoid adverse impacts on the environment. The process consists of two measurements of housing need: existing need and future need. The RHNA for the housing element update is presented in **Table 2-1**, p. 2-8, in Chapter 2, Project Description. As shown, the city’s fair share of the regional housing need for 2023 to 2031 was calculated as 82,070 housing units, or approximately 10,260 units per year, which would be an approximate 400-percent increase over the city’s average net housing production of 2,545 housing units per year for the past two decades (see **Table 2-2**, p. 2-16 in Chapter 2).

Local

The city has adopted many laws and regulations to preserve existing housing stock and create incentives for housing production, including the laws and regulations discussed below.

San Francisco Planning Code Section 317

Planning code section 317 codifies the review criteria for allowing housing demolition projects, conversions, and mergers and denies residential demolition permits until approval of a new construction permit is obtained. Section 317 of the planning code requires that a public hearing be held prior to approval of any permit that would remove existing residential and unauthorized housing units, with certain codified exceptions. Projects that would result in the loss of one or two residential units are subject to a mandatory discretionary review hearing before the planning

commission, unless the code specifically requires conditional use authorization. Projects resulting in the loss of three or more units require a conditional use hearing before the planning commission.

San Francisco Planning Code Section 415

Planning code section 415 codifies the city's inclusionary housing program which aims to create affordable to low, moderate, and/or middle-income housing units in new buildings. The program requires projects with 10 or more units to reserve a percentage of units in the building to be rented or sold below market rate, reserve a percentage of units in another building to be rented or sold below market rate, dedicate land for affordable housing, pay a fee, or satisfy the requirement with a combination of these actions. The process is overseen by the Mayor's Office of Housing and Community Development.

San Francisco Subdivision Code Section 1302(c)(2)

Section 1302(c)(2) of the San Francisco Subdivision Code⁵⁴ recognizes that condominium conversion subdivisions differ from other subdivisions. Therefore, adoption of special requirements is required. The purposes of these special requirements include a) preserving a balance between ownership and renting, b) promoting an expansion of homeownership opportunities, c) reducing the impact of conversions on nonpurchasing tenants who may be required to relocate, d) preventing the displacement of elderly and disabled tenants, e) ensuring that purchasers of converted housing have been properly informed of a structure's physical condition, f) preventing the loss of the city's low- or moderate-income housing stock, and g) expanding the supply of the city's low- or moderate-income housing stock.

San Francisco Residential Rent Stabilization and Arbitration Ordinance

Chapter 37 of the San Francisco Administrative Code, which includes changes and updates published in court decisions and state legislation,⁵⁵ was established to protect tenants from unfair rent increases while balancing the interests of property owners. The ordinance caps allowable annual rental increases and establishes the San Francisco Rent Stabilization and Arbitration Board, which is empowered to review the state of rent in San Francisco, certify rental increases which are beyond the allowable amount, and hear complaints related to rent control.

Residential Hotel Unit Conversion and Demolition Ordinance

The Residential Hotel Unit Conversion and Demolition Ordinance⁵⁶ (chapter 41 of the San Francisco Administrative Code) regulates the demolition and conversion of residential hotel units to other uses. Chapter 41A of the San Francisco Administrative Code minimizes adverse impacts on the housing supply and on persons and households of all income levels resulting from the loss of residential units through their conversion to tourist and transient use.

⁵⁴ San Francisco Department of Building Inspection, *Codes*, 2021, <https://sfdbi.org/codes>, accessed September 27, 2021.

⁵⁵ San Francisco Rent Board, *The Rent Ordinance*, 2021, <https://sfrb.org/rent-ordinance>, accessed December 12, 2021.

⁵⁶ San Francisco Department of Building Inspection, *Residential Hotel Unit Conversion and Demolition*, 2021, <https://sfdbi.org/residentialhotels>, accessed September 27, 2021.

Accessory Dwelling Unit Program

Accessory dwelling units (ADUs), also known as secondary units, in-law units, cottages, or granny flats, are units added to existing residential buildings. ADUs may be allowed in underutilized areas such as parking areas, yards, storage areas, or boiler rooms to convert such spaces into housing units. San Francisco first adopted its ADU program in 2014 for select districts and expanded it to apply citywide in September 2016. The program reduces some planning code requirements, making it possible for property owners to add ADUs to their buildings through an application and approval.⁵⁷

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to population and housing associated with implementation of the proposed action. It also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of roads or other infrastructure)
- Displace substantial numbers of existing people or housing units, thereby necessitating the construction of replacement housing

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing

⁵⁷ San Francisco Department of Building Inspection, *Accessory Dwelling Unit Program, per Ordinance 162-16, 2021*, <https://sfdbi.org/adu>, accessed September 30, 2021.

element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

Impacts and Mitigation Measures

Impact PH-1: The proposed action would not induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). (*Less than Significant*)

Plan Bay Area 2050 estimates that between now and 2050, the Bay Area's population will increase from nearly 8 million to more than 10 million. The housing element update establishes goals, policies, and actions to address the existing and projected housing needs of San Francisco.

As discussed under "2020 conditions" in Chapter 2, Project Description, as of 2020, there were approximately 407,000 housing units and 771,000 jobs in the city. Under the 2050 environmental baseline, the department estimates that there would be approximately 509,000 housing units and 882,000 jobs in the city by 2050, an increase of approximately 102,000 housing units and 111,000 jobs compared to 2020 conditions.

Table 2-4, p. 2-29, shows the projected change in housing units between the 2050 environmental baseline and the proposed action by planning district. Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions (i.e., an average of approximately 5,000 housing units per year through 2050, which would be approximately 1,600 more housing units per year through 2050 compared to the 2050 environmental baseline). The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (2050 environmental baseline). In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated under the existing 2014 housing element by 2050.

As illustrated in **Figure 2-1**, p. 2-2, in Chapter 2, Project Description, most of the well-resourced areas, as defined by the state's opportunity area maps, are in the northern and western portions of the city. The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to these well-resourced areas along transit corridors and low-density areas that are primarily located on the west and north sides of the city. Specifically, as shown in **Table 2-4**, p. 2-29, and **Figure 2-11**, p. 2-32, in Chapter 2, a greater share of new housing units under the proposed action would be concentrated in the Ingleside, Inner Sunset, Marina, Outer Sunset, Richmond, and Western Addition planning districts when compared to the 2050 environmental baseline. Although the department anticipates that there would be an incremental increase in demand for neighborhood services (e.g., retail services) in the north and west sides of the city where increased residential growth would be directed under the proposed action, the resulting changes in the number and distribution of jobs across planning districts under the proposed action would be negligible relative to the total jobs under the 2050 environmental baseline. Therefore, this EIR assumes that the number and distribution of jobs in the city would be essentially the same under both the 2050 environmental baseline and the proposed action.

The proposed action recommends equitable distribution of growth throughout the city, which would mean increased development in well-resourced areas. Examples of housing element update policies that are intended to increase development in well-resourced areas include Policies 17, 18, 21, and 33. Examples of housing element update policies that encourage development along transit corridors include Policies 20 and 33. The department assumes that adoption of the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and modify density controls in low-density areas that are primarily located on the north and west sides of the city. Examples of housing element policies that encourage increased density include Policies 20 and 26. These density-related strategies in the proposed action would increase the number of housing units that could be developed on each parcel compared to development under in the existing 2014 housing element.

The increases in population in San Francisco are forecast to continue through 2050, regardless of whether the housing element update is adopted. The city's existing zoning would not preclude the development density required to fully accommodate planned population growth in the city through 2050. Implementation of the proposed action and future development consistent with the proposed action would not directly induce substantial unplanned population growth but, rather, would address an existing need for housing and plan for future housing demand in San Francisco. As such, the housing element update is the city's proposed plan to accommodate anticipated growth; it would not induce unplanned population growth.

The proposed action would not induce substantial unplanned population growth, either directly or indirectly. The impact would be *less than significant*, and no mitigation measures are necessary.

Impact PH-2: The proposed action would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing. (*Less than Significant*)

The housing element update does not include any changes to existing zoning or other land use controls and does not authorize any new development; further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. As previously described in "Approach to Analysis," above, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update. This includes impacts from the construction and operation of an additional 50,000 housing units under the proposed action compared to the 2050 environmental baseline.

Past government regulations and private practices, such as exclusionary planning and zoning laws and discriminatory rental and lending practices, underlie many of the housing inequities in San Francisco. This includes direct displacement – where existing housing was removed or demolished to provide sites for new housing development, requiring the relocation of current tenants - and indirect displacement – where housing costs have increased such that current tenants have been unable able to continue to afford to live in the affected communities. Given the reduction in Black and American Indian populations over the past four decades⁵⁸, the

⁵⁸ Summary of the Draft Needs Assessment of the Housing Element 2022 Update, <https://sfhousingelement.org/summary-draft-needs-assessment-housing-element-2022-update>, p. 4.

rise in rents and housing sales prices as compared to median incomes⁵⁹, and the number of residential evictions each year⁶⁰, the department acknowledges that indirect and involuntary displacement has occurred and continues to occur in San Francisco. Displacement is also largely a result of a limited housing stock.

In recent years, community members have expressed concern that new market-rate housing development may exacerbate involuntary displacement in vulnerable areas of the city. While recognizing that involuntary displacement is continuing to occur in San Francisco, the department has previously determined that substantial evidence does not establish a correlation between market-rate housing development and the rate of involuntary displacement. However, a recently published study on how new market-rate housing production affects displacement and replacement in the San Francisco Bay Area finds that new market-rate housing production may increase displacement for lower income people under certain circumstances.⁶¹ Key takeaways from this study include:

- Most renters (80 percent) do not live in the same block group (about six blocks in dense areas) where new housing is being built.
- When new market-rate housing is built, there is a slight increase in both people moving out of the neighborhood and people moving in (known as churn) across most socio-economic groups.
- New market-rate housing production slightly increases displacement for lower income people, and slightly decreases moving out for high-income people.
- The increase in rates of displacement (involuntary moves) for very low- to moderate-socio-economic groups are not as high as commonly feared, at 0.5 to 2 percent above normal rates.
- The highest socio-economic groups move in at higher rates than other groups and move out at lower rates. In other words, the highest-socio-economic groups experience disproportionate benefits of new market-rate housing production.
- The rate of residents of extremely low and middle socio-economic status moving out of their neighborhoods does not change by very much when new market-rate units are constructed.
- In gentrifying areas⁶², new market-rate construction neither worsens nor eases rates of moving out. It increases rates of people moving in across all socio-economic groups, particularly high-socio-economic residents.

⁵⁹ *Ibid*, pp. 22-25.

⁶⁰ *Ibid*, p. 27.

⁶¹ IGS, University of California, Berkeley, March 2022, *Housing Market Interventions and Residential Mobility in the San Francisco Bay Area*, <https://www.frbsf.org/community-development/wp-content/uploads/sites/3/housing-market-interventions-and-residential-mobility-in-the-san-francisco-bay-area.pdf>, accessed March 23, 2022.

⁶² The study examines the displacement effects of new market-rate housing in *gentrifying areas* in Oakland, San Francisco, and San Jose, which are defined as neighborhoods that are “substantially increasing in housing prices or rents, while also experiencing a substantial influx of high-income or highly-educated residents.”

- To help existing residents stay in their neighborhoods after new market-rate construction, either subsidized housing construction (with community preference) or housing preservation with continued protections is recommended.
- More research is needed to understand effects in different contexts and over the long term.

Thus, based on the latest available research, new market-rate housing development may contribute to indirect displacement of lower income communities in San Francisco.

The housing element update is San Francisco's first housing plan centered in racial and social equity. The majority of the update's policies and actions focus on advancing equitable housing access, racial and social equity, and eliminating displacement. Specifically, Objective 3.c seeks to: "Eliminate community displacement within areas vulnerable to displacement." Examples of housing element update policies that are intended to address displacement through various strategies such as tenant protections, preservation of affordability, production of affordable housing, and advancing equitable access to housing resources and affordable units include:

- Policy 1. Minimize all no-fault and at-fault evictions for all tenants, and elevate direct rental assistance as an eviction protection strategy.
- Policy 2. Preserve affordability of existing subsidized housing, government-owned or cooperative-owned housing, or SRO hotel rooms where the affordability requirements are at risk or soon to expire.
- Policy 3. Reform and support the City's acquisition and rehabilitation program to better serve areas and income ranges underserved by affordable housing options and areas vulnerable to displacement.
- Policy 4. Preserve the affordability of unauthorized dwelling units while improving their safety and habitability.
- Policy 5. Improve access to the available Affordable Rental and Homeownership units especially for racial and social groups who have been disproportionately underserved or for American Indian, Black, Japanese, Filipino, and other communities directly harmed by past discriminatory government actions in the past including redlining, Redevelopment and Urban Renewal, the Indian Relocation Act or WWII Japanese incarceration based on a reparations framework.
- Policy 15. Expand permanently affordable housing investments in Priority Equity Geographies to better serve American Indian, Black, and other People of color within income ranges underserved, including extremely-, very low-, and moderate-income households.
- Policy 19. Enable low and moderate-income households, particularly American Indian, Black, and other people of color, to live and prosper in Well-resourced Neighborhoods by increasing the number of permanently affordable housing units.
- Policy 21. Prevent the potential displacement and adverse racial and social equity impacts of zoning changes, planning processes, or public and private investments especially in areas vulnerable to displacement. (Objectives: 3.c, 2.c, 4.c)

The department is currently conducting a race and social equity analysis for the housing element update.⁶³ The department will use the results of this study to inform the creation of guidelines to avoid displacement for future zoning changes and development projects, among other items as called for in housing element update Policy 21.

Thus, the proposed action would strengthen the city's anti-displacement policies, which would reduce both direct and indirect displacement of vulnerable communities. In addition, the overall objective of the housing element update is to increase housing production for all income levels to accommodate projected population growth, and to shift a greater share of the city's future housing growth from the communities that are most vulnerable to displacement impacts on the east side of the city to well-resourced areas along transit corridors and within low-density areas that are primarily located on the west and north sides of the city. In doing so, the housing element update would address the city's extreme housing supply shortage while reducing the burdens of new housing development on the city's vulnerable communities. In contrast, under the 2050 environmental baseline, the rate of housing production would not increase and would continue to be focused primarily in vulnerable communities on the east side of the city that have been disproportionately impacted by new housing development over the past several decades. Thus, the proposed action would reduce both direct and indirect displacement compared to the environmental baseline. Therefore, the proposed action would not displace substantial numbers of existing people or housing units necessitating the construction of replacement housing and this impact would be *less than significant*.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-PH-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact from unplanned population growth or displacement. (*Less than Significant*)

The Waterfront Plan Update provides a long-range policy framework that will guide future port improvement projects, programs, and stewardship initiatives. The Waterfront Plan Update focuses on changes in land use and redevelopment; it would not result in a substantial amount of residential development. Future development

⁶³ San Francisco Planning Department. ND. *Draft Racial and Social Equity Impact Analysis Scope*, <https://www.sfhousingelement.org/draft-racial-and-social-equity-impact-analysis-scope>.

consistent with the Waterfront Plan Update would be limited to the rehabilitation of historic sheds, warehouse buildings, and a small amount of housing. Once approved, any growth that would occur would become part of the city's planned growth. As such, the Waterfront Plan Update would not result in a cumulatively considerable impact on population and housing. The Second Transbay Tube Project and Increased Caltrain Service and Pennsylvania Avenue Extension are intended to improve transportation services for both the existing and forecast population. Downtown Congestion Pricing includes implementing a toll charge, investing revenues to increase transit service, and improving bicycle, pedestrian, and transit infrastructure, which would not result in population growth.

Routine infrastructure repair, maintenance, and improvement projects are intended to serve both the existing population and forecast population. They would not induce unplanned population growth in the city. Therefore, the proposed action when combined with the identified cumulative projects would not result in a cumulative impact related to unplanned population growth in San Francisco and would not contribute to a cumulatively considerable impact related to unplanned population growth in the Bay Area.

As discussed under Impact PH-2, the potential indirect loss of housing units as a result of future development consistent with the housing element update would be offset by the potential construction of up to approximately 150,000 housing units in city by 2050 compared to 2020 conditions. On a cumulative level, development in San Francisco would not result in the displacement of people or housing without providing replacement housing.

The cumulative projects, individually or in combination with the housing element update, would not induce a substantial level of unplanned population growth or result in the displacement of substantial numbers of people or housing units. Any new development in the city would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the general plan, governing area plans, design guidelines, and zoning codes, including development standards, as well as other applicable land use plans that are intended to reduce impacts related to population and housing. In addition, new construction in the city is required to comply with existing regulations, including planning code section 317, which regulates mergers and the demolition of housing units. As such, the housing element update would not combine with related projects to result in a significant cumulative population and housing impact. For these reasons, the housing element update in combination with reasonably foreseeable future projects would not result in a significant cumulative population and housing impact. The cumulative impact would be *less than significant*.

Greenhouse Gas Emissions

ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere. The accumulation of GHGs from human activities contributes to global climate change. The primary GHGs, or climate pollutants, are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. In addition to these primary gases, black carbon is a part of fine particulate air pollution and not a gas but is an important climate pollutant.

Individual development projects contribute to the cumulative effects of climate change by emitting GHGs during demolition, construction, and operation. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Black carbon has been identified as a major contributor to global climate change, possibly second only to carbon dioxide. Human activities produce black carbon as a result of the incomplete combustion of fossil fuels, biofuels, and biomass materials.⁶⁴ Nitrous oxide is a by-product of various industrial processes. Other GHGs, including hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, are generated in certain industrial processes. GHGs are typically reported in “carbon-dioxide-equivalent” measures.⁶⁵

It is unequivocal that human-caused increases in GHGs have warmed the atmosphere, ocean, and land and that human-induced climate change is affecting every inhabited region in the world; increasing frequency and severity of extreme events, such as heat waves, precipitation, droughts, and tropical cyclones. Further, the scale of changes observed across the climate system is unprecedented in the thousands of years for which we have data.⁶⁶ Secondary effects of climate change in California include impacts on agriculture, the state’s electricity system, and native ecosystems and biodiversity (especially those of freshwater and anadromous fish); increasing vulnerability of infrastructure (including levees, such as in the Sacramento-San Joaquin Delta); an increase in the frequency and intensity of extreme wildfires, flooding events, and drought conditions; and changes in disease vectors.^{67,68}

Existing Greenhouse Gas Emission Estimates⁶⁹

The California Air Resources Board (air board) estimated that, in 2019, California produced about 418 million gross metric tons of carbon dioxide equivalents.⁷⁰ The air board found that transportation is the source of 40 percent of the state’s GHG emissions, followed by industrial uses, at 21 percent, and electricity generation (both in-state and outside generation), at 14 percent. Commercial and residential fuel use (primarily for heating) accounted for 10 percent of GHG emissions.⁷¹ In San Francisco, motorized transportation and buildings (i.e., natural gas and electricity use within the buildings) were the two largest sources of GHG emissions, accounting for 47 percent (approximately 2.2 million metric tons of carbon dioxide equivalents) and 41 percent (1.9 million metric tons of carbon dioxide equivalents), respectively, of the approximately 4.6 million metric tons of carbon

⁶⁴ Center for Climate and Energy Solutions, *What Is Black Carbon?* April 2010, <https://www.c2es.org/site/assets/uploads/2010/04/what-is-black-carbon.pdf>, accessed January 19, 2022.

⁶⁵ Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in “carbon dioxide equivalents,” which present a weighted average, based on each gas’s heat absorption (or “global warming”) potential.

⁶⁶ Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report_smaller.pdf, accessed October 25, 2021.

⁶⁷ Ibid.

⁶⁸ California Climate Change Center, *Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California*, 2012, https://ucanr.edu/sites/Jackson_Lab/files/155618.pdf, accessed March 28, 2022.

⁶⁹ For this topic, *existing conditions* is defined as the conditions in 2019, the year for which the most recent applicable data are available.

⁷⁰ California Air Resources Board, *California Greenhouse Gas Inventory for 2000–2019 by Category as Defined in the Scoping Plan*, n.d., <https://www.arb.ca.gov/cc/inventory/data/data.htm>, accessed August 20, 2021.

⁷¹ Ibid.

dioxide equivalents emitted in San Francisco in 2019.⁷² Other sources include landfilled organics (approximately 7 percent), municipal emissions (approximately 3 percent, including both municipal buildings and fleets), and agriculture (approximately 1.8 percent).⁷³

Electricity in San Francisco is provided primarily by the San Francisco Public Utilities Commission (SFPUC) and Pacific Gas & Electric. In 2019, electricity consumption in San Francisco totaled approximately 5.6 million megawatt-hours.⁷⁴ The public utilities commission produces approximately 80 percent of the City of San Francisco's power through Hetch Hetchy Power and CleanPowerSF, with the remaining energy demand being met by Pacific Gas & Electric. CleanPowerSF was launched by the SFPUC in 2016 to provide renewable energy to residents and businesses. The organization was formed to achieve the city's ambitious targets regarding the delivery of completely emissions-free electricity by 2030.⁷⁵ Pacific Gas & Electric's 2019 power mix was as follows: 2 percent natural gas and other, 45 percent nuclear, 25 percent eligible renewables (described below), and 28 percent large hydroelectric.⁷⁶

The SFPUC, which operates three hydroelectric power plants as part of San Francisco's Hetch Hetchy water supply system, as well as solar, biomass, and biowaste infrastructure, provides electrical power to the San Francisco Municipal Railway, city buildings, and a limited number of commercial accounts in San Francisco.⁷⁷ Electricity generated by the Hetch Hetchy system achieves net-zero GHG emissions.⁷⁸

⁷² San Francisco Department of the Environment, *San Francisco's Carbon Footprint*, n.d., <https://sfenvironment.org/carbonfootprint>, accessed August 20, 2021.

⁷³ Ibid.

⁷⁴ California Energy Commission, *Electricity Consumption by County*, 2019, <https://ecdms.energy.ca.gov/elecbycounty.aspx>, accessed August 20, 2021.

⁷⁵ Stark, Kevin, Power Switch: S.F. Builds Case for Pushing Out PG&E, *San Francisco Public Press*, 2019, <https://sfpublicpress.org/news/2019-06/power-switch-sf-builds-case-for-pushing-out-pge>, accessed November 20, 2019.

⁷⁶ Pacific Gas & Electric, *Exploring Clean Energy Solutions*, 2019, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page?WT.mc_id=Vanity_cleanenergy, accessed November 19, 2019.

⁷⁷ San Francisco Public Utilities Commission, *Hetch Hetchy Power System*, n.d., <https://www.sfpuc.org/about-us/our-systems/hetch-hetchy-power-system>, accessed March 28, 2022.

⁷⁸ California Air Resources Board. 2020. Mandatory GHG Reporting – 2019 GHG Emissions Data. <https://ww2.arb.ca.gov/mrr-data>, accessed October 12, 2021.

REGULATORY FRAMEWORK

Greenhouse Gas Reduction Goals

At the state level, Executive Order S-3-05⁷⁹ sets forth a series of target dates by which time statewide emissions of GHGs will need to be progressively reduced, as follows:

- Reduce emissions to 1990 levels by 2020 (approximately 427 million metric tons of carbon dioxide equivalents), and
- Reduce emissions to 80 percent below 1990 levels by 2050 (approximately 85 million metric tons of carbon dioxide equivalents).

After Executive Order S-3-05 was signed, the California Legislature passed California Global Warming Solutions Act⁸⁰ in 2006. The California Global Warming Solutions Act requires the air board to design and implement emission limits, regulations, and other measures so that statewide GHG emissions are reduced to 1990 levels by 2020.

Pursuant to the California Global Warming Solutions Act, the air board adopted the 2008 climate change scoping plan, which outlines measures to meet the 2020 GHG reduction limits. To meet the goals of the California Global Warming Solutions Act, California needed to reduce its GHG emissions to 1990 levels by 2020 (equal to approximately 15 percent below 2008 levels).⁸¹ In 2018, the air board announced that inventory year 2016 emissions had dropped below 1990 levels, which represented early achievement of the California Global Warming Solutions Act goal.⁸² Since inventory year 2016, emissions have continued to be below the 1990 level.⁸³

For the 2030 horizon, Executive Order B-30-15, signed in 2015, sets an interim statewide GHG emissions reduction target of 40 percent below 1990 levels by 2030.⁸⁴ Executive Order B-30-15 also requires all state agencies with jurisdiction over sources of GHG emissions to implement measures within their statutory authority for achieving reductions in GHG emissions and meeting the 2030 and 2050 GHG emission reduction targets.

On August 24, 2016, the California Legislature passed the California Global Warming Solutions Act of 2016,⁸⁵ thereby amending the California Global Warming Solutions Act of 2006. The California Global Warming Solutions

⁷⁹ Office of the Governor, *Executive Order S-3-05*, June 1, 2005. [http://static1.squarespace.com/static/549885d4e4b0ba0bff5dc695/t/54d7f1e0e4b0f0798cee3010/1423438304744/California+Executive+Order+S-3-05+\(June+2005\).pdf](http://static1.squarespace.com/static/549885d4e4b0ba0bff5dc695/t/54d7f1e0e4b0f0798cee3010/1423438304744/California+Executive+Order+S-3-05+(June+2005).pdf), accessed November 20, 2019. Executive Order S-3-05 sets forth a series of target dates by which statewide emissions of GHGs will need to be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels (approximately 457 million metric tons of carbon dioxide equivalents); by 2020, reduce GHG emissions to 1990 levels (approximately 427 million metric tons of carbon dioxide equivalents); and by 2050, reduce GHG emissions to 80 percent below 1990 levels (approximately 85 million metric tons of carbon dioxide equivalents).

⁸⁰ California Health and Safety Code division 25.5, section 38500 et seq.

⁸¹ California Air Resources Board, *AB 32 Global Warming Solutions Act of 2006*, <https://ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006>, accessed September 30, 2021.

⁸² California Air Resources Board, *Climate Pollutants Fall below 1990 Levels for the First Time, 2018*, <https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time>. accessed April 23, 2020.

⁸³ California Air Resources Board, *California Greenhouse Gas Inventory for 2000–2019 by Category as Defined in the Scoping Plan*, n.d., <https://www.arb.ca.gov/cc/inventory/data/data.htm>, accessed August 20, 2021.

⁸⁴ Office of the Governor, *Executive Order B-30-15*, April 29, 2015, <https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html>, accessed November 19, 2019.

⁸⁵ California Health and Safety Code division 25.5, section 38566

Act of 2016 directed the air board to adopt, to the extent technologically feasible and cost effective, the rules and regulations necessary to achieve a reduction in statewide GHG emissions (i.e., to 40 percent below 1990 levels by 2030). The passage of the California Global Warming Solutions Act of 2016 codified the 2030 interim GHG emissions reduction target established by Executive Order B-30-15.

The California Global Warming Solutions Act of 2016 was paired with California Government Code division 2 of title 2, article 7.6 of chapter 1.5, California Health and Safety Code sections 39510, 39607, 38506, 38531, and 38562.5 (2016), and amended the health and safety code to provide additional guidance on how to achieve the reduction targets established in Executive Order B-30-15 and the California Global Warming Solutions Act of 2016. The California Global Warming Solutions Act of 2016 and California Government Code division 2 of title 2, article 7.6 of chapter 1.5, California Health and Safety Code sections 39510, 39607, 38506, 38531, and 38562.5 became effective January 1, 2017.

In accordance with the California Global Warming Solutions Act, the climate change scoping plan must be updated every five years to evaluate California Global Warming Solutions Act policies and ensure that California is on track with respect to achieving long-term climate stabilization goals. The first scoping plan update was approved in 2014, and an additional update was approved in 2017.

The 2017 climate change scoping plan identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires the air board and other state agencies to develop and enforce regulations and other initiatives for reducing GHGs.⁸⁶ The plan also highlights California's progress toward meeting the 2030 GHG emissions reduction goals of the California Global Warming Solutions Act of 2016 and evaluates how to align the state's longer-term GHG reduction strategies with other state policy priorities for water, waste, natural resources, clean energy, transportation, and land use.⁸⁷ Specifically, the 2017 climate change scoping plan update articulates a key role for local governments, recommending they establish GHG reduction goals for both their municipal operations and the community consistent with those of the state.

The 2017 climate change scoping plan estimates 385 million metric tons of carbon dioxide equivalents (MMT CO₂e) would be reduced from known commitments to reduce emissions, leaving a gap of 236 MMT CO₂e that is needed to meet the 2030 target codified by the California Global Warming Solutions Act of 2016. The air board concluded that the gap would need to be bridged by the cap-and-trade program's achievement of 236 MMT CO₂e. **Table 4.1-10** shows the reductions that the air board is expecting from the known commitments of the scoping plan and the amount needed from the cap-and-trade program to achieve the 2030 target.⁸⁸

⁸⁶ California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017, https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, accessed March 17, 2020.

⁸⁷ Ibid.

⁸⁸ Ibid.

Table 4.1-10: Cumulative GHG Reductions from the 2017 Scoping Plan Measures⁸⁹

Scoping Plan Measure	GHG Reductions (million metric tons of carbon dioxide equivalents)
Short-Lived Climate Pollutants	217
Mobile Sources, Clean Fuels, and Technology and Freight	64
Landfill Methane Energy Efficiency	64
Biofuels	25
50% Renewable Portfolio Standards	16
Cap-and-Trade Program	236
Total Scoping Plan Reductions to Meet California Global Warming Solutions Act of 2016 Target	621

Source: California Air Resources Board, *California’s 2017 Climate Change Scoping Plan*, November 2017, https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf, accessed September 3, 2021.

Note: The numbers in this table are rounded; therefore summing all the rows yields a slightly different number from that shown in this table or cited in this section.

For the post-2030 period, Executive Order B-55-18 establishes a statewide goal of achieving carbon neutrality as soon as possible, but no later than 2045, and achieving and maintaining net negative emissions thereafter. The next update to the scoping plan, the 2022 climate change scoping plan, will assess progress toward achieving the California Global Warming Solutions Act of 2016 2030 target and lay out a path to achieve carbon neutrality by mid-century pursuant to Executive Order B-55-18.⁹⁰

At the regional level, the air district is responsible for attaining and maintaining federal and state air quality standards in the San Francisco Bay Area Air Basin, as established by the federal Clean Air Act and the California Clean Air Act. The acts require the air board and air districts to develop plans for areas that do not meet air quality standards. The most recent air quality plan, the Bay Area 2017 Clean Air Plan, includes a goal that calls for reducing GHG emissions to 1990 levels by 2020, 40 percent below 1990 levels by 2035, and 80 percent below 1990 levels by 2050.⁹¹ In addition, the air district established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the air basin.⁹² In addition, the air district’s CEQA Air Quality Guidelines help lead agencies comply with the requirements of CEQA with respect to projects that may have potentially adverse impacts on air quality. The air district advises lead agencies to consider adopting a GHG emissions reduction strategy that meets climate stabilization goals and then review projects for compliance

⁸⁹ California Air Resources Board, *California’s 2017 Climate Change Scoping Plan*, November 2017, https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf, accessed September 3, 2021.

⁹⁰ California Air Resources Board, *AB 32 Climate Change Scoping Plan*, <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan>, accessed October 12, 2021.

⁹¹ Bay Area Air Quality Management District, *2017 Clean Air Plan*, April 2017, <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>, accessed November 19, 2019.

⁹² Bay Area Air Quality Management District, *Climate Protection Program*, 2017, <http://www.baaqmd.gov/plans-and-climate/climate-protection/climate-protection-program>, accessed November 19, 2019.

with the GHG emissions reduction strategy as a CEQA threshold of significance.⁹³ This is consistent with the approach to analyzing GHG emissions described in CEQA Guidelines section 15183.5.

At the local level, the city adopted ordinance 81-08 in May 2008, amending the San Francisco Environment Code to establish GHG emissions targets and require departmental action plans to reduce GHG emissions. Ordinance 81-08 authorized the San Francisco Department of the Environment to coordinate efforts to meet the targets and established the following GHG emissions reduction limits and target dates:

- Determine 1990 citywide GHG emissions by 2008 (i.e., the baseline level, with reference to which target reductions have been set),
- Reduce GHG emissions to 25 percent below 1990 levels by 2017,
- Reduce GHG emissions to 40 percent below 1990 levels by 2025, and
- Reduce GHG emissions to 80 percent below 1990 levels by 2050.⁹⁴

In July 2021, the city adopted an updated GHG ordinance to demonstrate the city's commitment to the Paris Agreement by establishing GHG reduction targets for 2030, 2040, and 2050 and setting other critical sustainability goals. The updated ordinance sets goals for both sector-based emissions and consumption-based emissions. The GHG targets established under ordinance 81-08 applied solely to sector-based emissions, which are those emissions that are generated within the geographic boundaries of the city. The updated ordinance reflects a more comprehensive effort to reduce GHG emissions by setting consumption-based targets as well. Consumption-based emissions are those that are associated with producing, transporting, using, and disposing of products and services consumed by people within the city, even those emissions that are generated outside of the city boundaries. The city's updated GHG reduction targets are as follows:

- By 2030, reduce sector-based GHG emissions to 61 percent below 1990 levels
- By 2030, reduce consumption-based GHG emissions to 30 metric tons of CO₂e per household or less, equivalent to a 40 percent reduction compared to 1990 levels
- By 2040, reach net-zero sector-based emissions and sequester any residual emissions using nature-based solutions⁹⁵
- By 2050, reduce consumption-based GHG emissions to 10 metric tons of CO₂e per household or less, equivalent to an 80 percent reduction compared to 1990 levels

These sector-based GHG reduction targets are more ambitious than those set forth in Executive Order B-30-15 (e.g., a 61 percent reduction in sector-based GHG emissions by 2030 rather than a 40 percent reduction by 2030) and Executive Order B-55-18 (e.g., achieving carbon neutrality by 2040 rather than by 2045). The consumption-

⁹³ Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, May 2017, http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed November 19, 2019.

⁹⁴ City and County of San Francisco, *Greenhouse Gas Emissions Targets and Departmental Action Plans*, May 13, 2008, https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_environment/0-0-0-908, accessed November 19, 2019.

⁹⁵ Nature-based solutions are those that remove remaining emissions from the atmosphere by storing them in natural systems that support soil fertility or employing other carbon farming practices.

based targets are consistent with the 2030 goal of Executive Order B-30-15 and the 2050 goal of Executive Order S-3-05 (80 percent below 1990 levels, by 2050).

The updated GHG ordinance also serves to codify the city's "0-80-100-Roots" climate action framework, which comprises climate and sustainability goals in these key areas: waste, transportation, energy, and carbon sequestration. The framework also emphasizes the importance of housing in implementing meaningful climate solutions, which require an increased supply of high-quality housing that is both affordable and near transit service. The goals in the 0-80-100-Roots framework are defined as follows:

- Zero Waste (0-80-100-Roots)
 - By 2030, reduce the generation of solid waste to 15 percent below 2015 levels and reduce the amount of solid waste that is incinerated or sent to landfill to at least 50 percent below 2015 levels
- Transportation (0-80-100-Roots)
 - By 2030, increase the percentage of low-carbon trips to at least 80 percent of measured trips and increase the number of electric vehicles to at least 25 percent of all registered private vehicles
 - By 2045, increase the number of electric vehicles to 100 percent of all registered private vehicles
- Energy (0-80-100-Roots)
 - By 2025, supply 100 percent renewable electricity
 - By 2045, supply 100 percent renewable energy
- Carbon Sequestration (0-80-100-Roots)
 - Sequester carbon through ecosystem restoration, including an increased urban tree canopy (i.e., tree roots), green infrastructure, and compost applications
- Housing and Buildings
 - Build at least 5,000 new housing units per year, with at least 30 percent provided as affordable housing units
 - By 2021, require zero onsite fossil fuel emissions from all new buildings
 - By 2035, require zero onsite fossil fuel emissions from all large existing commercial buildings

To support the 2021 Housing and Buildings goal of zero onsite fossil fuel emissions from all new buildings, the board of supervisors passed an all-electric new construction ordinance in November 2020. The ordinance prohibits the installation of natural gas and propane space conditioning, water heating, cooking, and clothes drying equipment and appliances in all new residential and commercial buildings with initial building permit applications that were filed after June 1, 2021.⁹⁶

⁹⁶ San Francisco Department of Building Inspection, *All-Electric New Construction Ordinance*, <https://sfdbi.org/AllElectricNewConstructionOrdinance>, accessed August 20, 2021.

San Francisco has developed many plans and programs for reducing the city's contribution to global climate change and meeting the goals of ordinance 81-08. The 2017 GHG Reduction Strategy Update⁹⁷ documents city actions related to pursuing cleaner energy, reducing energy consumption, supporting alternative transportation, and implementing solid waste policies. For instance, the city has implemented mandatory requirements and incentives that have measurably reduced GHG emissions, including, but not limited to, requirements for increased energy efficiency in new and existing buildings, requirements for the installation of solar panels or vegetation on roofs (i.e., living roofs), implementation of a green building strategy, implementation of a transportation sustainability program, adoption of a zero-waste strategy, adoption of a construction and demolition debris recovery ordinance, creation of a solar energy generation subsidy, incorporation of alternative-fuel vehicles in the city's transportation fleet (including buses), and adoption of a mandatory recycling and composting ordinance. The strategy also includes specific regulations for new development, which would reduce GHG emissions generated by anticipated future development. These GHG emissions reduction actions resulted in a 41 percent reduction in GHG emissions in 2019 compared with 1990 levels.^{98,99} This level of GHG emissions substantially surpasses the 2020 and 2030 goals in the air district's 2017 Clean Air Plan, Executive Orders S-3-05 and B-30-15, California Global Warming Solutions Act, California Global Warming Solutions Act of 2016, and the city's 2017 GHG emissions reduction goal.

The July 2021 GHG ordinance requires the San Francisco Department of the Environment to prepare and submit to the mayor a climate action plan (CAP) by December 31, 2021. The CAP, which was released on December 8, 2021, and will be updated every five years, carries forward the efforts of the city's previous CAPs and aligns with the Paris Agreement (e.g., limit global warming to 1.5 degrees Celsius) as well as the reduction targets adopted within the GHG ordinance. The CAP also incorporates an equity framework that addresses historic inequities; prioritizes the social, economic, and environmental benefits from implementing the CAP; and ensures that those benefits are distributed equitably.¹⁰⁰

Transportation Sector Regulations

With respect to transportation-related emissions, the climate change scoping plan relies on the requirements of the Sustainable Communities and Climate Protection Act of 2008¹⁰¹ to reduce carbon emissions from land use decisions. The Sustainable Communities and Climate Protection Act of 2008 requires regional transportation plans developed by each of the state's 18 metropolitan planning organizations to incorporate a sustainable communities strategy in each regional transportation plan, which will then achieve the GHG emissions reduction

⁹⁷ San Francisco Planning Department, *2017 Greenhouse Gas Reduction Strategy Update*, July 2017, https://sfplanning.s3.amazonaws.com/sfmea/GHG/GHG_Strategy_October2017.pdf, accessed October 29, 2021.

⁹⁸ The City's GHG inventory is quantified in accordance with the *GHG Protocol for Cities* developed by the World Resources Institute, C40, and ICLEI. World Resources Institute, C40 Cities, ICLEI, *Global Protocol for Community-Scale Greenhouse Gas Inventories*, https://ghgprotocol.org/sites/default/files/standards/GPC_Full_MASTER_RW_v7.pdf, accessed October 29, 2021.

Additionally, the annual GHG inventory is submitted to global reporting entities (Carbon Disclosure Project, C40) and OpenDataSF.

⁹⁹ San Francisco Department of the Environment, *San Francisco's Carbon Footprint*, <https://sfenvironment.org/carbonfootprint>, accessed October 12, 2021.

¹⁰⁰ San Francisco Department of the Environment, *San Francisco's Climate Action Plan 2021*, https://sfenvironment.org/sites/default/files/2021_climate_action_plan.pdf, accessed January 4, 2022.

¹⁰¹ California Government Code, Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, 65080.01; California Public Resources Code, Sections 21061.3, 21159.28; Chapter 4.2, Division 13, Section 21155.

targets set by the air board. Plan Bay Area 2050, the Metropolitan Transportation Commission’s regional transportation plan, was adopted in October 2021. Plan Bay Area 2050 serves as a roadmap for the San Francisco Bay Area’s future through 2050.¹⁰² For the San Francisco Bay Area, the per capita GHG emissions reduction target applicable to Plan Bay Area 2050 is 19 percent by 2035 (i.e., emissions from vehicles and light-duty trucks compared with 2005 levels).¹⁰³

The Governor’s Office of Planning and Research (OPR) implemented changes to the CEQA Guidelines, including the addition of section 15064.3, which requires CEQA transportation analyses to move away from a focus on vehicle delay and level of service. In support of these changes, OPR published its *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which states that the determination of a project’s transportation impact should be based on whether project-related vehicle miles traveled (VMT) per capita (or VMT per employee) would be 15 percent lower than that of existing development in the region.¹⁰⁴ OPR’s technical advisory explains that this criterion is consistent with CEQA section 21099, which states that the criteria for determining significance must “promote a reduction in greenhouse gas emissions.” In addition, the 15 percent reduction is consistent with the VMT reduction that the air board has determined to be necessary to meet the state’s 2030 and 2050 GHG goals.¹⁰⁵ This metric is intended to replace the use of vehicle delay and level of service for measuring transportation-related impacts.

In addition to actions to reduce VMT, the state has also adopted legislation to improve vehicle fuel efficiency. With the passage of Pavley I,¹⁰⁶ California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. Pavley I amended the health and safety code and requires the air board to develop and implement regulations to reduce automobile and light-duty truck GHG emissions. Although litigation challenged these regulations and the U.S. Environmental Protection Agency initially denied California’s related request for a waiver, the waiver request was later granted. Additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the Advanced Clean Cars measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025. In 2020, the air board estimated that fleet-wide fuel economy in California would be 42.5 miles per gallon.¹⁰⁷ In December 2021, the U.S. EPA finalized the

¹⁰² Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2050: A Vision for the Future*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf, accessed January 3, 2022.

¹⁰³ These targets became applicable October 1, 2018. California Air Resources Board, *SB 375 Regional Plan Climate Targets*, <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>, accessed October 29, 2021.

¹⁰⁴ Governor’s Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA*. November 2017, http://www.opr.ca.gov/docs/20171127_Transportation_Analysis_TA_Nov_2017.pdf, accessed August 16, 2021.

¹⁰⁵ Ibid.

¹⁰⁶ California Health and Safety Code, Sections 42823, 43018.5.

¹⁰⁷ California Air Resources Board. *Comparison of Greenhouse Gas Reductions for the United States and Canada under U.S. CAFÉ Standards and California Air Resources Board Greenhouse Gas Regulation*, https://ww2.arb.ca.gov/sites/default/files/2020-03/pavleycafe_reportfeb25_08_ac.pdf, accessed October 29, 2021.

national greenhouse gas emissions standards rule, which is expected to result in a projected industry-wide fuel economy of 40 miles per gallon by 2026, an approximately 25 percent increase over the previous standard.¹⁰⁸

Adopted in December 2018, the Innovative Clean Transit regulation¹⁰⁹ requires public transit agencies to gradually transition to 100 percent zero-emission bus fleets by 2040. According to the air board, this regulation will¹¹⁰ reduce GHG emissions for all Californians, especially transit-dependent and disadvantaged communities. Most of these benefits will be in the state's most populated and affected areas where transit buses are most prevalent. Additionally, the regulation will increase penetration of the first wave of zero-emission heavy-duty technologies into applications that are well suited to their use to further achieve emission reduction benefits, and save energy and reduce dependency on petroleum and other fossil fuels. Other economic and societal benefits are likely to be achieved as well, such as the expansion of the zero-emission vehicle industry to bring high-quality green jobs to local communities and trained workforce to California, and improved mobility and connectivity with zero-emission transportation modes and reduced growth in light-duty VMT.

Energy Sector Regulations

For the energy sector, California established aggressive renewable portfolio standards under Public Resources Code chapter 516, statutes of 2002¹¹¹ and Public Resources Code chapter 464, statutes of 2006,¹¹² which required retail sellers of electricity to provide at least 20 percent of their electricity from renewable sources by 2010. Executive Order S-14-08 (November 2008) expanded the state's renewable portfolio standards, which call for 20 to 33 percent of electricity to come from renewable sources by 2020.

In April 2011, Governor Brown signed Public Resources Code chapter 1, statutes of 2011,¹¹³ codifying GHG emissions reduction goals for energy suppliers (i.e., 33 percent of electricity from renewable energy by 2020). Under Public Resources Code chapter 1, statutes of 2011, all electricity-supplying entities must adopt the goals of the new renewable portfolio standard (i.e., 20 percent of retail sales from renewable sources by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020).¹¹⁴

Eligible renewable sources include geothermal, ocean wave, solar photovoltaic, and wind sources but exclude large hydroelectric facilities (30 megawatts or more). Therefore, because the SFPUC receives more than 67

¹⁰⁸ U.S. Environmental Protection Agency, *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026, 2022*, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions#additional-resources>, accessed March 25, 2022.

¹⁰⁹ California Code of Regulations, Title 13, Sections 2023, 2023.1–2023.11.

¹¹⁰ California Air Resources Board. *Innovative Clean Transit – About*, <https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit/about>, accessed September 3, 2021.

¹¹¹ Chapter 2.3, part 1 of Division 1, California Public Utilities Code sections 387, 390.1, 399.25

¹¹² California Public Resources Code, Sections 25620.1, 25740–25743, 25745, 25746, 25749, 25751, 25470.5, 25744.5. California Public Utilities Code, Chapter 3, Part 1, Division 1, Sections 387, 399.11–399.16, and 2854.

¹¹³ California Fish and Game Code, Section 705; California Public Resources Code, Sections 25740, 25740.5, 25741, 25742, 25746, 25747, 25751, 25519.5, 25741.5; California Public Utilities Code, Sections 399.11–399.20, 399.26, 399.30, 399.31, 1005.1

¹¹⁴ Ibid.

percent of its electricity from large hydroelectric facilities, the remaining electricity provided by the SFPUC is required to be 100 percent renewable.¹¹⁵

Public Resources Code chapter 547, statutes of 2015¹¹⁶ increased the stringency of the renewable portfolio standard. Public Resources Code chapter 547, statutes of 2015, establishes a renewable portfolio standard that calls for 50 percent of electricity to come from renewable sources by 2030, along with interim targets of 40 percent by 2024 and 45 percent by 2027. California Public Utilities Code, sections 399.11, 399.15, 399.30, and 454.53 accelerates the renewable energy target for 2030 that was set by Public Resources Code Chapter 547, statutes of 2015 from 50 percent to 60 percent.

Short-Lived Climate Pollutant Regulations

California Health and Safety Code, Chapter 4.2, Part 2, Division 26, Section 39730(2014) directed the air board, in coordination with other state agencies and local air districts, to develop a comprehensive Short-Lived Climate Pollutant¹¹⁷ (SLCP) Reduction Strategy, while California Health and Safety Code, Sections 39730.5–39730.8 and California Public Resources Code, Chapter 13.1, Part 3, Division 30, Section 42652 (2016) directed the air board to approve and implement the SLCP Reduction Strategy to achieve the following reductions in SLCPs:

- 40 percent reduction in methane below 2013 levels by 2030
- 40 percent reduction in hydrofluorocarbon gases below 2013 levels by 2030
- 50 percent reduction in anthropogenic black carbon below 2013 levels by 2030

The bill also establishes the following targets for reducing organic waste in landfills and methane emissions from dairy and livestock operations, as follows:

- 50 percent reduction in organic waste disposal from the 2014 level by 2020
- 75 percent reduction in organic waste disposal from the 2014 level by 2025
- 40 percent reduction in methane emissions from livestock manure management operations and dairy manure management operations below the dairy sector's and livestock sector's 2013 levels by 2030

The air board and California's Department of Resources Recycling and Recovery (CalRecycle) are currently developing regulations to achieve the organic waste reduction goals under California Health and Safety Code, Sections 39730.5–39730.8 and California Public Resources Code, Chapter 13.1, Part 3, Division 30, Section 42652.

¹¹⁵ San Francisco Public Utilities Commission, *Adopt an Enforcement Program as required under the California Renewable Energy Resources Act*, December 13, 2011, <https://infrastructure.sfwater.org/fds/fds.aspx?lib=SFPUC&doc=741114&data=285328890>, accessed October 29, 2021.

¹¹⁶ California Health and Safety Code, Section 44258.5; California Labor Code, Section 1720; California Public Resources Code, Sections 25310, 25943, 25302.2, and 25327; California Public Utilities Code, Chapter 2.3, Part 1, Division 1, Sections 359, 399.4, 399.11, 399.12, 399.13, 399.15, 399.16, 399.18, 399.21, 399.30, 454.55, 454.56, 701.1, 740.8, 9505, 9620, 337, 352, 237.5, 365.2, 366.3, 454.51, 454.52, 740.12, 9621, 9622.

¹¹⁷ Short-Lived Climate Pollutants have relatively short atmospheric lifetimes, but impacts are strong over the short term. Examples of Short-Lived Climate Pollutants include black carbon, methane, and hydrofluorocarbons.

In January 2019 and June 2019, CalRecycle proposed new and amended regulations. Among other things, the regulations set forth minimum standards for organic waste collection, hauling, and composting.¹¹⁸

The air board adopted the SLCP Reduction Strategy in March 2017 as a framework for achieving the methane, hydrofluorocarbon, and anthropogenic black carbon reduction targets set by California Health and Safety Code, Sections 39730.5–39730.8 and California Public Resources Code, Chapter 13.1, Part 3, Division 30, Section 42652. The SLCP Reduction Strategy includes 10 measures regarding SLCPs, which fit within a wide range of ongoing planning efforts throughout the state, including the air board’s and CalRecycle’s proposed rulemaking on organic waste diversion.

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to greenhouse gas emissions associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of

¹¹⁸ The final regulations include an incremental approach to implementation, which began on January 1, 2022, with full implementation by 2025.

reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

With respect to GHG emissions, determination of the impacts of the proposed action is based on compliance with local, regional, and state plans, policies, and regulations adopted for the purpose of reducing the cumulative impacts of climate change. GHG emissions are analyzed in the context of their contribution to the cumulative effects of climate change because individual actions could never generate enough GHG emissions to result in a noticeable change in the global average temperature.

Given that the city's GHG emissions reduction targets are more aggressive than the state's 2030 and 2045 GHG emissions reduction targets, the city GHG ordinance is consistent with the goals of statewide executive orders and bills (i.e., California Global Warming Solutions Act, California Global Warming Solutions Act of 2016, and Executive Orders S-3-05, B-30-15, B-55-18). Therefore, actions that are consistent with the 2017 GHG Reduction Strategy Update would be consistent with the state's GHG goals and would not conflict with an applicable plan or generate GHG emissions that would make a considerable contribution to global climate change.

The air district has reviewed the GHG Reduction Strategy and concluded that "aggressive GHG reduction targets and comprehensive strategies like San Francisco's help the Bay Area move toward reaching the California Global Warming Solutions Act goals and also serve as a model from which other communities can learn." Although the California Global Warming Solutions Act milestone year of 2020 passed just two years ago, San Francisco has already met the 2030 GHG reduction goal of the California Global Warming Solutions Act of 2016 (40 percent below 1990 levels). San Francisco's updated GHG ordinance includes a pathway to the 2050 goals of the California Global Warming Solutions Act of 2016, ensuring that the city will continue to serve as a model for other communities. As discussed above, the climate change scoping plan adopted pursuant to the California Global Warming Solutions Act of 2016 is the state's overarching plan for addressing climate change. Its recommendations are intended to curb projected business-as-usual increases in GHG emissions and reduce them to 40 percent below 1990 levels. Meeting the emissions targets of the California Global Warming Solutions Act of 2016 as well as longer-term goals would result in an overall annual net decrease in GHG emissions compared with current levels and account for the projected increases in emissions resulting from anticipated growth.

CEQA Guidelines section 15064.4 calls for a "good-faith effort" to "describe, calculate, or estimate" GHG emissions. CEQA Guidelines section 15064.4 also allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. In accordance with section 15064.4, the significance of GHG impacts should consider the extent to which the proposed action would increase or reduce GHG emissions, exceed a locally applicable threshold of significance, or comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions." The CEQA Guidelines also state that a project may be found to have a less-than-significant impact if it complies with an adopted plan that includes specific measures to reduce GHG emissions (section 15064[h][3]). Similarly, the air district has prepared guidelines and methodologies for analyzing GHGs. These guidelines are consistent with

CEQA Guidelines sections 15064.4 and 15183.5, which pertain to the analysis and determination of significant impacts from a proposed project's GHG emissions.¹¹⁹

Impacts and Mitigation Measures

Impact GHG-1: The proposed action would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (*Less than Significant*)

As discussed in Chapter 2, Project Description, the proposed action does not include specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure). Therefore, this section evaluates potential impacts from GHG emissions that could result from reasonably foreseeable future actions that would be consistent with the housing element update.

Individual projects, such as new housing developments, contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operation. Direct operational effects from individual projects include GHG emissions from new vehicle trips. Indirect effects include the GHG emissions from electricity providers, including generation of the energy required to pump, treat, and convey water; other GHG emissions are associated with waste removal, waste disposal, and landfill operations. This impact discussion evaluates the proposed action's impacts with respect to each sector of emissions from future development anticipated as an indirect result of the proposed action. As discussed previously, one of the primary objectives of the proposed action is to increase housing production in the city to an average of approximately 5,000 housing units per year through 2050, which would result in approximately 50,000 more housing units than the 2050 environmental baseline. Therefore, the city would be able to provide a larger share of the regional housing need with the characteristics discussed below to reduce the intensity of GHG emissions compared to baseline conditions.

Transportation

The proposed action would increase the portion of future housing growth in the city near transit corridors and the low-density single-family home areas on the west side of the city. With respect to transportation emissions, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element by 2050 and would therefore result in a corresponding increase in total daily VMT. Citywide, total daily VMT would increase from approximately 11.6 million VMT to 12.3 million VMT, representing a 6 percent increase from the 2050 environmental baseline. San Francisco Bay Area total daily VMT would increase by a smaller percentage than the citywide VMT increase because more new housing would be located in San Francisco, an area with lower-than-regional-average per capita VMT. By accommodating an additional 50,000

¹¹⁹ On February 16, 2022, the air district introduced updated draft GHG thresholds for public review and comment by March 18, 2022. The draft updated thresholds recommend land use projects meet certain performance measures or be evaluated for consistency with a GHG reduction strategy. As noted above, the analysis of the proposed action's GHG impacts is based on consistency with the city's GHG Reduction Strategy, and thus the analysis would be consistent with updated GHG thresholds in their current draft form. Published materials are available at the following link: <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>

housing units within San Francisco, regional total daily VMT would increase by only 2 percent from the 2050 environmental baseline (approximately 184 million VMT to 188 million VMT per day). Thus, although regional total daily VMT would increase because of the additional housing, the percentage increase would be less than what would be anticipated if the additional housing were located in an area with per capita VMT that is higher than the regional average. For comparison, if an additional 50,000 housing units were located in an area with higher per capita VMT compared to the regional average—for example, in a suburb—regional total VMT would increase by a larger percentage.

GHG emissions per vehicle mile are anticipated to decrease substantially from 2021 conditions to the 2050 environmental baseline as a result of vehicle turnover that results in more fuel-efficient vehicles and an increasing share of hybrid and electric vehicles. Similarly, the Advanced Clean Cars measure and future fuel economy standards contribute to the improvement in the GHG emissions rate. In 2021 and 2050, the statewide fleet average carbon dioxide emission rates are calculated to be 422 grams per mile and 311 grams per mile, respectively, which is a decrease of 26 percent.¹²⁰ Even if the total VMT increases, as discussed in Section 4.4, Transportation and Circulation, the citywide effect from implementation of the proposed action would result in a less-than-significant VMT impact because the per capita VMT would be less than the threshold recommended by the air board and OPR.¹²¹ Depending on the year and type of land use, daily per capita VMT would be between 47 and 53 percent below the regional average, which is a substantially greater reduction than the 15 percent threshold recommended by OPR. Similarly, the air board has determined that a 14.3 to 16.8 percent reduction in VMT per service population by 2050, compared with the 2015–2018 average, would be needed statewide to meet long-term climate change planning goals.¹²² Because the proposed action would meet this threshold on a citywide level, transportation emissions would be consistent with the state’s long-term climate change goals and would not be considered substantial.

In addition, new construction in the city is required to comply with the city’s Transportation Demand Management (TDM) program requirements and electric vehicle infrastructure requirements. For the TDM program, the department reviews whether new construction complies with the program requirements during the permit review process. The planning code requires certain new development projects to incorporate “design features, incentives, and tools” to reduce VMT (section 169). Developers choose measures from a menu of options to develop an overall TDM plan. Some options in the menu may overlap with requirements elsewhere in the planning code (e.g., bicycle parking, car-share parking). Each future development project’s TDM plan requires routine monitoring and reporting to the department to demonstrate compliance. The applicability of the TDM measures is determined by the type of land use. Additionally, the Department of Building Inspection determines whether new construction complies with the electric-vehicle infrastructure requirements during the permit review process.

¹²⁰ These values have been calculated using the air board’s EMFAC database emission rates.

¹²¹ Governor’s Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA*, 2018, https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf, accessed September 2, 2021.

¹²² California Air Resources Board, *California Air Resources Board 2017 Scoping Plan-Identified VMT Reduction and Relationship to State Climate Goals*, 2019.

Building Energy

Per the city's all-electric new construction ordinance, all housing units would be constructed without natural gas service, thereby eliminating onsite fossil fuel combustion, in accordance with the city's "0-80-100-Roots" framework for new buildings. The all-electric ordinance took effect June 1, 2021, and applies to all new housing units, whether constructed consistent with the housing element update or the 2050 environmental baseline. As a result of the ordinance, energy consumption in future housing units would become carbon free as San Francisco's electricity supply shifts toward renewable sources. Therefore, energy consumed within the housing units constructed under the proposed action would not result in substantial GHG emissions because the energy would be derived solely from electricity that would be from 100 percent renewable sources by 2025 if the city meets its renewable energy goal in the updated GHG ordinance. In addition, residential buildings with four to 10 occupied floors constructed in the city would also be subject to the city's "better roofs" requirement, which mandates solar photovoltaic and/or solar thermal (i.e., solar water heating) systems.¹²³

Waste

All development in San Francisco is required to comply with the city's Recycling and Composting Ordinance, Construction and Demolition Debris Recovery Ordinance, and green building code, which would reduce the amount of material sent to landfills and reduce GHGs emissions.

Water and Wastewater

All development in San Francisco is required to comply with the San Francisco Green Building Requirements for Water Use Reduction, including sections 4.103.2.2 and 5.103.1.2 of the green building code; sections 4.303.1-2 and 5.303.3 of the California Green Building Standards Code (CALGreen); section 12A10 of the San Francisco Housing Code; and section 1313A of the building code. Lower water consumption results in lower indirect GHG emissions because consuming water requires energy to pump, treat, and convey the water and resulting wastewater. **Figure 2-7**, p. 2-24, in Chapter 2, Project Description, shows the projected heights and density controls for future development consistent with the housing element update. Compared to the existing 2014 housing element, the proposed action would direct a greater portion of the projected growth for the city to the well-resourced areas. To achieve that outcome, a foreseeable change in land use and density could include the following:

1. Removing allowable density limits and increasing allowable height limits along existing and projected rapid network transit corridors and certain transit nodes
2. Removing or increasing allowable density limits, without increasing allowable height limits, in low-density areas (Residential Housing [RH], Residential Mixed [RM], and Neighborhood Commercial [NC] districts) within approximately 800 feet of these corridors

¹²³ Division 4.2 Energy Efficiency, section 4.201 of the San Francisco Building Inspection Commission Code. Buildings that do not have sufficient solar potential are exempted.

3. Increasing allowable density limits in low-density areas (RHs) to four housing units in areas beyond 800 feet of these corridors

This shift in housing development patterns, from single-family homes to multi-family buildings, would result in per capita emissions reductions in the energy and water sectors because multi-family buildings use less energy and water on a per household basis.^{124,125}

Summary

Overall, the proposed action includes housing policies that are aimed at increasing housing production in San Francisco and changing the geographic distribution of housing within the city compared to the 2050 environmental baseline. As discussed above, physical development, such as new housing development, emits GHGs during construction and operation. Direct emissions include GHG emissions from new vehicle trips; indirect GHG emissions are largely generated from energy use. Other GHG emissions from housing development are associated with waste removal, waste disposal, and landfill operations. Therefore, future development consistent with the proposed action would contribute to annual long-term increases in GHG emissions.

The department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element by 2050. Therefore, under the proposed action, San Francisco would provide a larger share of the regional housing need with housing units that reduce GHG emissions compared to baseline conditions, because multi-family housing buildings use less energy and water on a per household basis. Additionally, new housing development would be in areas with low VMT levels and would be subject to the city's TDM program as well as applicable building code requirements regarding electric-vehicle infrastructure, energy efficiency, the provision of renewable energy, all-electric buildings, and water conservation. Lastly, new development would be subject to the city's waste reduction measures. For these reasons, the proposed action would result in a *less-than-significant* impact with respect to GHG emissions; no mitigation measures are necessary. The proposed action's consistency with the city's CAP is discussed under Impact GHG-2, below.

Impact GHG-2: The proposed action would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases. (*Less than Significant*)

The city has recently taken several important steps toward increased sustainability. As noted in the Regulatory Framework, the city adopted a GHG ordinance with updated targets and a goals-based framework ("0-80-100-Roots"), and in December 2021, the San Francisco Department of the Environment prepared a CAP to meet these goals. To achieve the city's GHG reduction goals, per the GHG ordinance and the CAP, additional programs and regulations will need to be adopted. Future housing development consistent with the proposed action would be

¹²⁴ U.S. Energy Information Administration, *2015 Residential Energy Consumption Survey Data*, Table CE1.5: Summary Annual Household Site Consumption and Expenditures in the West, <https://www.eia.gov/consumption/residential/data/2015/c&e/pdf/ce1.5.pdf>.

¹²⁵ Multi-family housing units normally do not have individual landscaped areas or lawns that require water as do single-family homes. As such, single-family homes typically require more water for landscaped areas and lawns.

subject to future programs and regulations, as applicable. Per the “0-80-100-Roots” framework, the city is striving to achieve its zero-waste, low-carbon transportation, renewable energy, and sequestration goals.

Future actions that are consistent with the proposed action would be subject to, and therefore would not conflict with, future regulations and programs. For example, actions the city takes to shift the electric grid toward renewable energy sources would affect new housing development, particularly because new housing is required to be all electric.

Under the proposed action, the department seeks to increase housing production in San Francisco to an average of 5,000 housing units per year through 2050, resulting in the construction of approximately 150,000 housing units. This annual housing production target aligns with the housing goals of the “0-80-100-Roots” framework in the updated GHG ordinance. The construction of new housing is critical to the success of the goals of the GHG ordinance because increased density would be necessary to achieve the transportation goal that calls for “80 percent” low-carbon trips. As noted under “Existing Greenhouse Gas Emission Estimates,” p. 4.1-77, motorized transportation contributes 47 percent of the city’s GHG emissions. Therefore, the proposed action, by prioritizing higher-density housing and housing near transit, is crucial to the achievement of the city’s net-zero goal. Consequently, the proposed action would increase San Francisco’s chances of meeting the GHG goals compared to the 2050 environmental baseline.

As noted under “Transportation Sector Regulations,” above, the air board set a target that called for a 19 percent reduction in GHG emissions from cars and light trucks, compared with 2005 emission levels, by 2035. The principal strategy to achieve this reduction is to concentrate growth in areas with low VMT per capita. Because San Francisco has the lowest per capita VMT of the Bay Area Region, actions that would increase housing density in San Francisco would be consistent with this GHG reduction target as identified in the region’s sustainable communities strategy. While San Francisco’s *existing* zoned capacity¹²⁶ provides the densities required to meet the Plan Bay Area 2050 housing and employment target growth for San Francisco, constraints to development, including high land values and construction costs, community opposition, and regulatory uncertainty, serve to increase the mismatch between housing supply and demand in the city. By seeking to further increase density in San Francisco, the proposed action would be consistent with and help to achieve the GHG reduction target of the Bay Area’s sustainable communities strategy, and thus, the housing element update would not be inconsistent or conflict with Plan Bay Area 2050.

As noted under Impact GHG-1, anticipated future growth consistent with the proposed action would be in an area (San Francisco) with low VMT and would be subject to San Francisco’s TDM program as well as applicable building code requirements regarding electric-vehicle infrastructure, energy efficiency, the provision of renewable energy, all-electric buildings, and water conservation. Lastly, future development would be subject to the city’s waste reduction measures. As such, the proposed action would be consistent with the 2017 GHG Reduction Strategy Update and would be required to comply with regulations that have been effective at meeting the city’s GHG reduction targets. San Francisco’s GHG emissions have decreased measurably compared with 1990 emissions levels, demonstrating that San Francisco has met or exceeded Executive Order S-3-05, California Global Warming Solutions Act, and the Bay Area 2017 Clean Air Plan GHG emission reduction goals for

¹²⁶ Existing zoned capacity, meaning if every parcel in San Francisco was fully built to existing maximum height and bulks controls.

2020. Further, the city has exceeded its goal to reduce GHG emissions to 25 percent below 1990 levels by 2017; emissions were reduced by 36 percent for that year 2017. As of 2019, the city has reduced its GHG emissions to 41 percent below 1990 levels despite a population increase of 22 percent.¹²⁷ In addition, San Francisco's local GHG emission reduction targets meet and exceed the long-term GHG emission reduction goals of Executive Order S-3-05, Executive Order B-30-15, California Global Warming Solutions Act of 2016, the Bay Area 2017 Clean Air Plan, and Executive Order B-55-18. Therefore, because the proposed action would be consistent with the city's GHG emission reduction strategy, it would meet and exceed the GHG emission reduction goals of Executive Order S-3-05, Executive Order B-30-15, California Global Warming Solutions Act of 2016, the Bay Area 2017 Clean Air Plan, and Executive Order B-55-18; would not conflict with these plans; and would not exceed San Francisco's applicable GHG threshold of significance. As such, the proposed action would result in a *less-than-significant* impact with respect to conflicts with a plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and no mitigation measures are necessary.

Recreation

ENVIRONMENTAL SETTING¹²⁸

Regional

Overall, there is approximately 5,890 acres of parkland and open space available within the city that is managed by various city, state, and federal agencies. These publicly owned open spaces make up approximately 20 percent of the city's land area and include a variety of parks, walkways, landscaped areas, recreational facilities, and unmaintained open space.

Local, state, and federal agencies oversee regional recreational facilities throughout the city. Notable regional recreational facilities include a regional trail system, comprising the Association of Bay Area Governments' San Francisco Bay Trail (Bay Trail), California Coastal Conservancy's California Coastal Trail, and Bay Area Ridge Trail, which is provided through collaboration with multiple Bay Area local government agencies. In addition, the California Department of Parks and Recreation (California State Parks) owns and manages more than 250 acres of state parks and open space within the city, including Candlestick Point State Recreation Area. The National Park Service manages approximately 1,600 acres of national and historic parks in the city, part of the Golden Gate National Recreation Area, which includes the Presidio of San Francisco, Alcatraz Island, Lands End Park, Fort Mason, and Fort Funston.

City of San Francisco

Most local parks and recreational facilities within the city are owned and operated by the San Francisco Recreation and Parks Department (SFRPD). The SFRPD maintains more than 220 parks, playgrounds, and open spaces throughout the city, mainly for neighborhood use. The park system also includes 17 full-complex

¹²⁷ San Francisco Department of the Environment, *San Francisco's Carbon Footprint*, <https://sfenvironment.org/carbonfootprint>, accessed October 12, 2021.

¹²⁸ For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

recreation centers, nine swimming pools, six golf courses, and hundreds of tennis courts, baseball diamonds, athletic fields, and basketball courts. The SFRPD also manages the Marina Yacht Harbor, Sigmund Stern Grove, and Golden Gate Park. **Table 4.1-11** shows the types of recreational facilities in the city that are managed by the SFRPD. In total, the SFRPD currently owns and manages approximately 4,100 acres of parks and open space in the city.

Table 4.1-11: SFRPD Recreational Facilities in San Francisco

Type of Facilities	Number of Facilities
San Francisco Recreation and Parks Department Facilities	
Neighborhood Parks	220
Playgrounds and Play Areas	179
Recreation Centers and Clubhouses	82
Basketball Courts	72
Tennis Courts	151
Soccer/Playfields	59
Swimming Pools	9
Community Gardens	42
Golf Courses	6
Dog Parks	33
Skate Park	4

Source: San Francisco Recreation and Parks Department, *Who We Are*, 2021, <https://sfrecpark.org/419/Who-We-Are>, accessed August 18, 2021. San Francisco Parks Alliance, *SF Parkland and Ownership*, 2021, <https://www.google.com/maps/d/viewer?mid=1cyfV2T2Y3l4keuutkygF9ZnK7qA-ef&ll=37.76231584629312%2C-122.43770500000001&z=12>, accessed October 29, 2021.

Other open spaces in the city are managed by the San Francisco Public Works (public works), Port of San Francisco (Port), Office of Community Investment and Infrastructure, and Treasure Island Development Authority (TIDA).

The city provides recreation and park facilities through the Street Parks Program, which transforms parcels owned by public works into green open space, gardens, neighborhood gathering spaces, and more. Public works’ park and open space facilities established as part of the Street Parks Program total approximately 105 acres. The Port owns and maintains approximately 30 publicly accessible recreational and open spaces in the city, most of which lie along the 7.5 miles of Port waterfront. Through public-private partnerships, the Office of Community Investment and Infrastructure is the primary agency overseeing the development of three San Francisco neighborhoods, which total over 1,100 acres of land: Hunters Point Shipyard/Candlestick Point, Transbay, and Mission Bay. The TIDA oversees the development of Treasure and Yerba Buena Islands. The Islands will include a diverse open space program comprised of eight distinct open space types, six on Treasure Island and two on Yerba Buena Island. The redevelopment of Treasure Island and Yerba Buena Island will provide approximately 290 acres of open space and parks, including 80 acres on Yerba Buena Island and 210

acres on Treasure Island. Together, with the approximately 2,457 acres of open space that is owned and managed by the city; the 255 acres, including the Candlestick Point State Recreation Area and Mount Sutro Open Space Reserve, owned and managed by the state; and the 1,642 acres, including the Presidio, Ocean Beach, Fort Funston, Fort Mason, Lands End, Sutro Heights, and China Beach, owned and managed by federal agencies, approximately 5,890 acres of parkland and open space are available within the city. In addition, the city's Shared Schoolyards program offers recreation space in the city. The program, a joint partnership between the city, San Francisco Unified School District, and community partners, offers approximately 38 acres of additional open space within school campuses for public recreational use during the weekends.¹²⁹ However, because of schools' rotating enrollment in the Shared Schoolyards program and public access limitations, facilities under the Shared Schoolyards program are considered supplemental recreational resources for the purposes of this analysis.

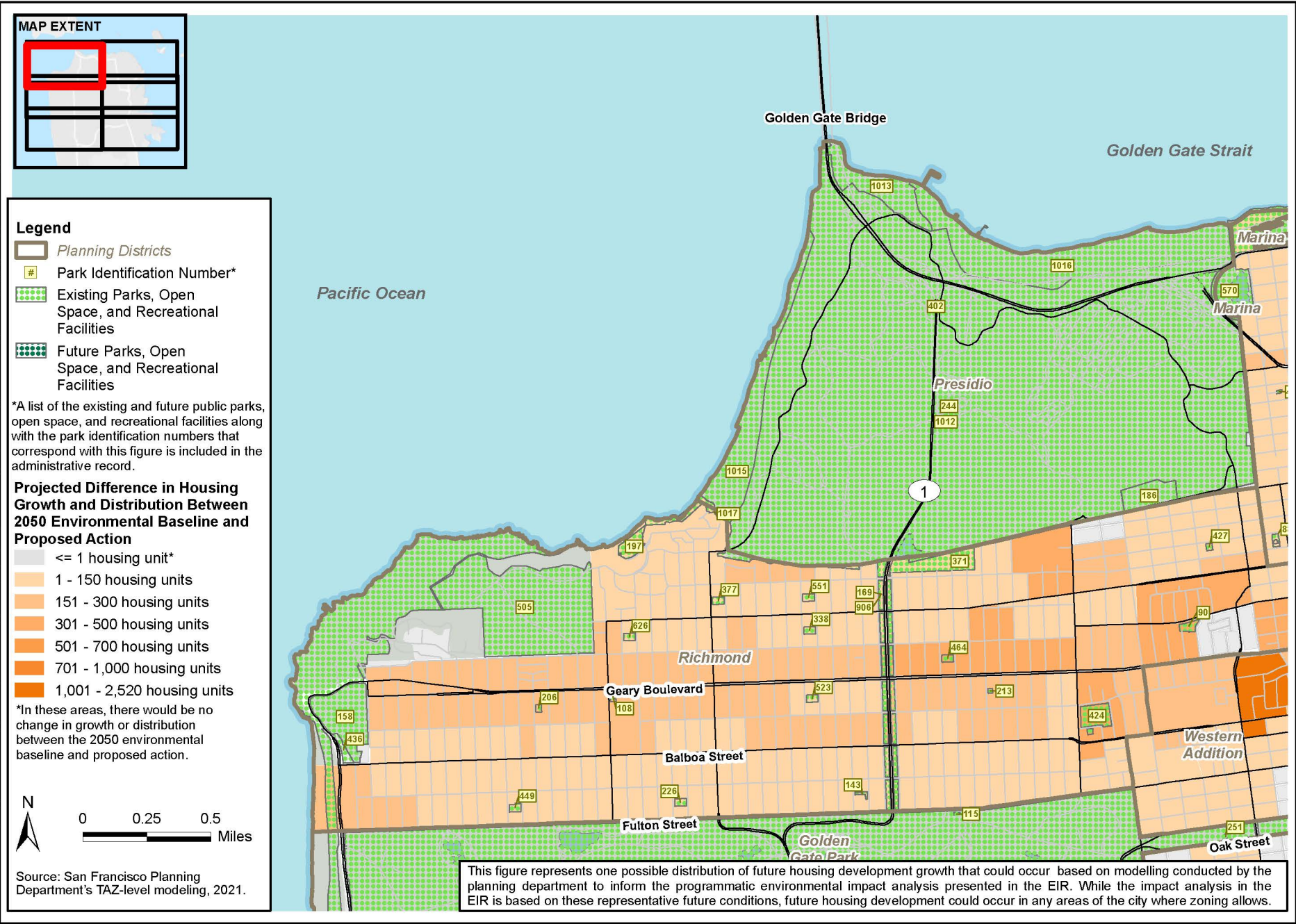
Figures 4.1-17a through 4.1-17f, pp. 4.1-100 through 4.1-105, illustrate existing and anticipated future recreational land uses and open spaces within San Francisco. The figure includes San Francisco's community gardens, land owned by the SFRPD, and other open space areas, such as the Presidio and Embarcadero, which are owned by other public entities such as the National Park Service, the Port, etc.¹³⁰

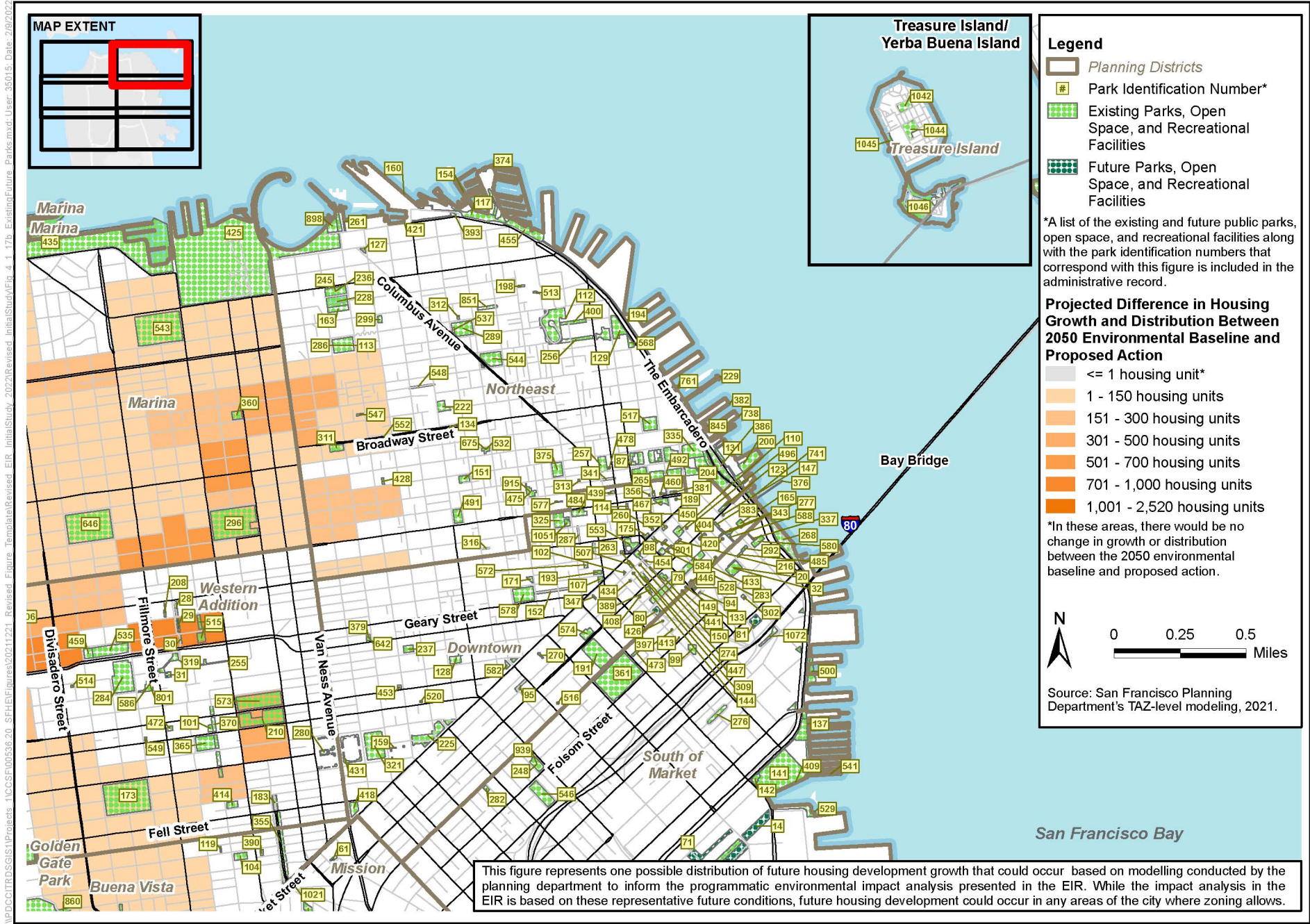
Within San Francisco, for this analysis, publicly accessible open spaces and recreational facilities are categorized according to their size and particular amenities for serving the city, district, neighborhood, or sub-neighborhood. Several large open spaces, including Golden Gate Park (1,017 acres), Lake Merced Park (614 acres [368-acre lake]), and McLaren Park (313 acres), compose about one-half of the total city-owned acreage for recreational use. These larger areas provide programs, activities, and recreational opportunities that serve the city as a whole and visitors; however, the majority of large open spaces and recreational facilities, including Golden Gate Park, Sigmund Stern Grove, Lake Merced Park, Mount Sutro Open Space Reserve, and Glen Canyon Park, are located in the western and central portions of the city. Smaller recreational facilities are used primarily by residents in the immediate surrounding area. These facilities, which include neighborhood parks, playgrounds, and play areas, are generally up to 10 acres in size. Neighborhood parks, playgrounds, and play areas tend to include recreational amenities such as sports fields, seating areas, landscaped spaces, public restrooms, dog play areas, and playgrounds.

¹²⁹ San Francisco Unified School District, *Shared Schoolyard Program, 2022*, <https://www.sfusd.edu/shareschoolyard>, accessed January 5, 2022.

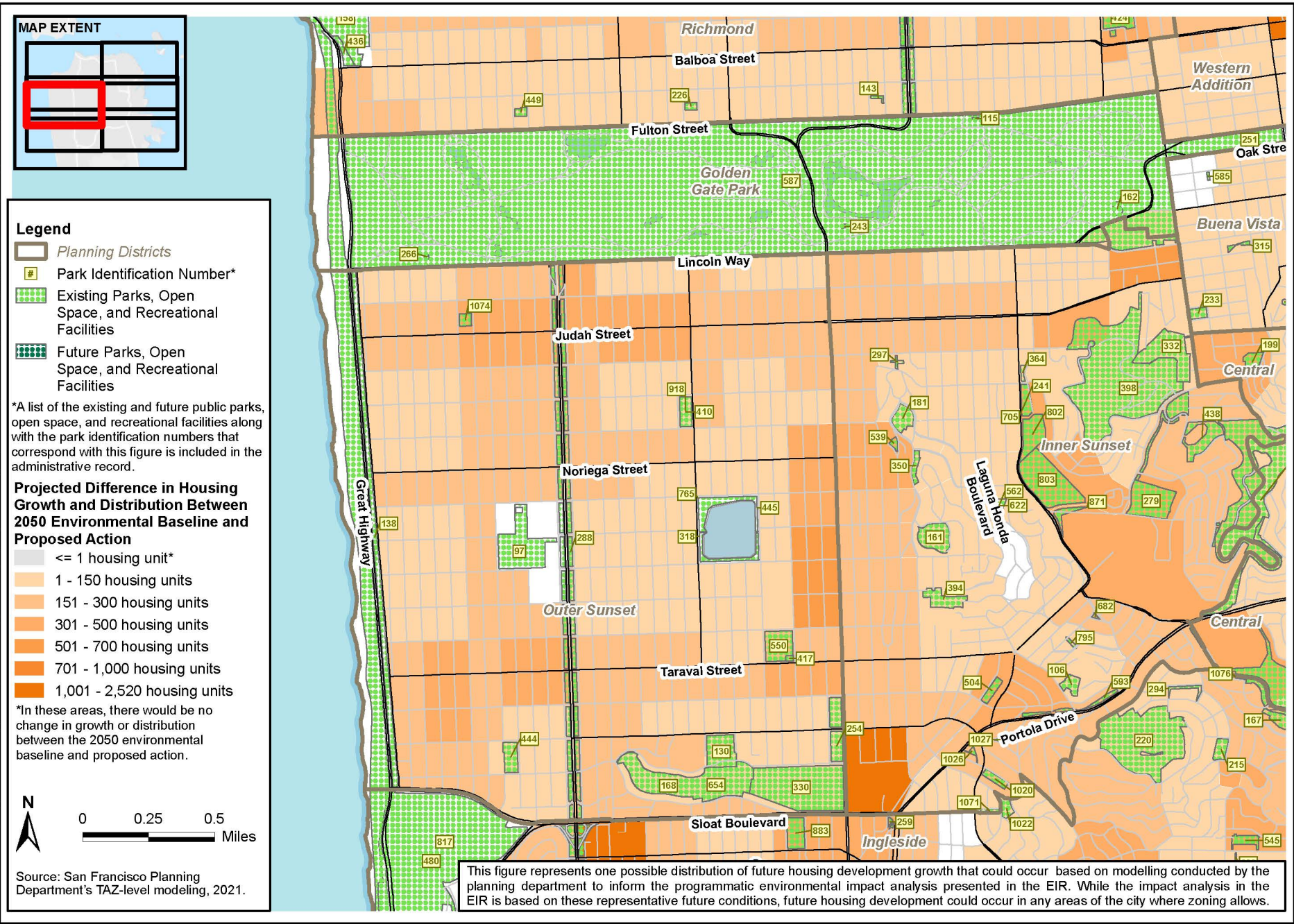
¹³⁰ City and County of San Francisco, GIS data showing existing and future recreational facilities, 2021, <https://datasf.org/opendata/>, accessed March 25, 2022. A detailed list of existing and future recreational facilities in the city along with park identification numbers that correspond with Figures 4.1-17a through 4.1-17f is included in the administrative record.

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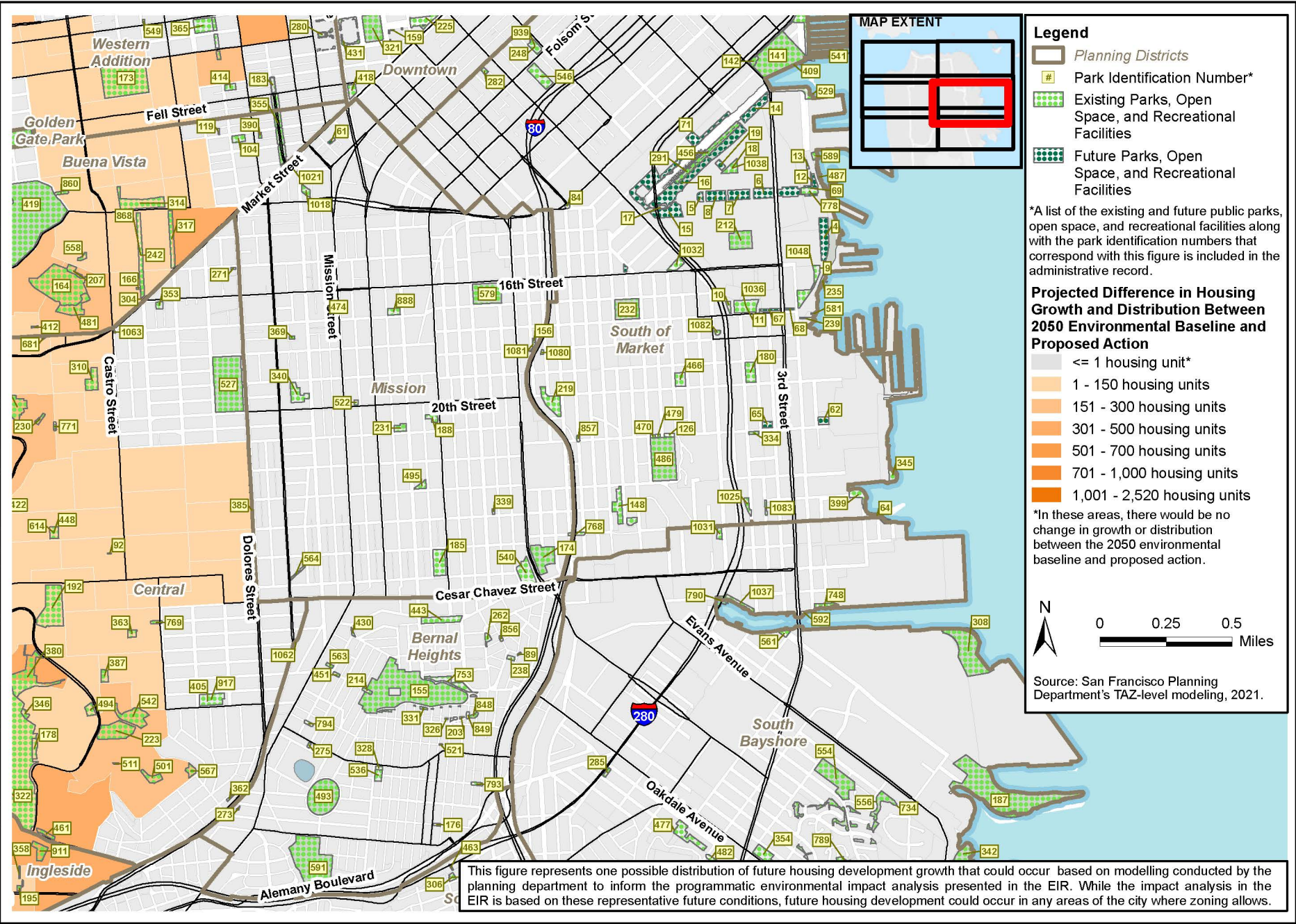




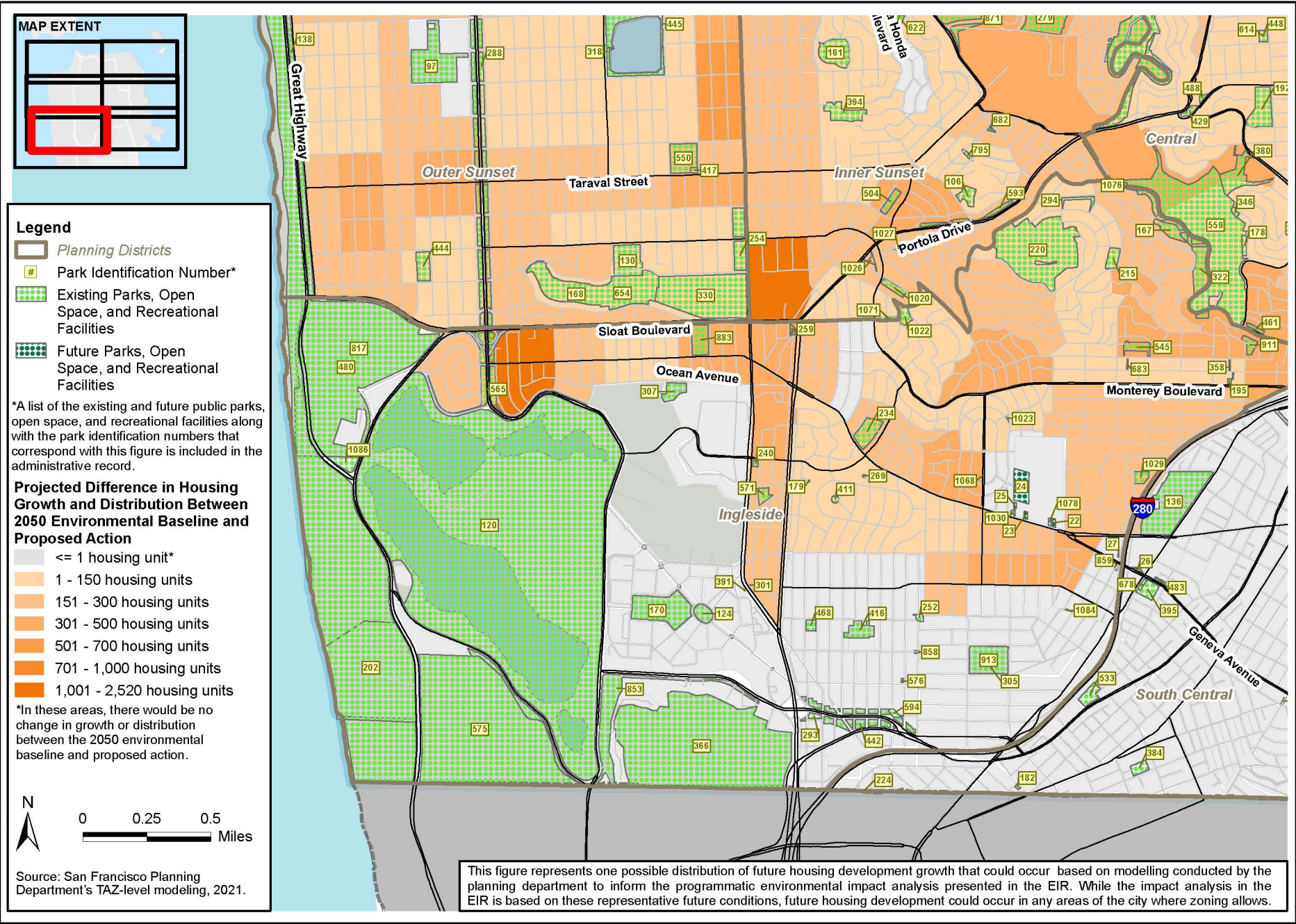
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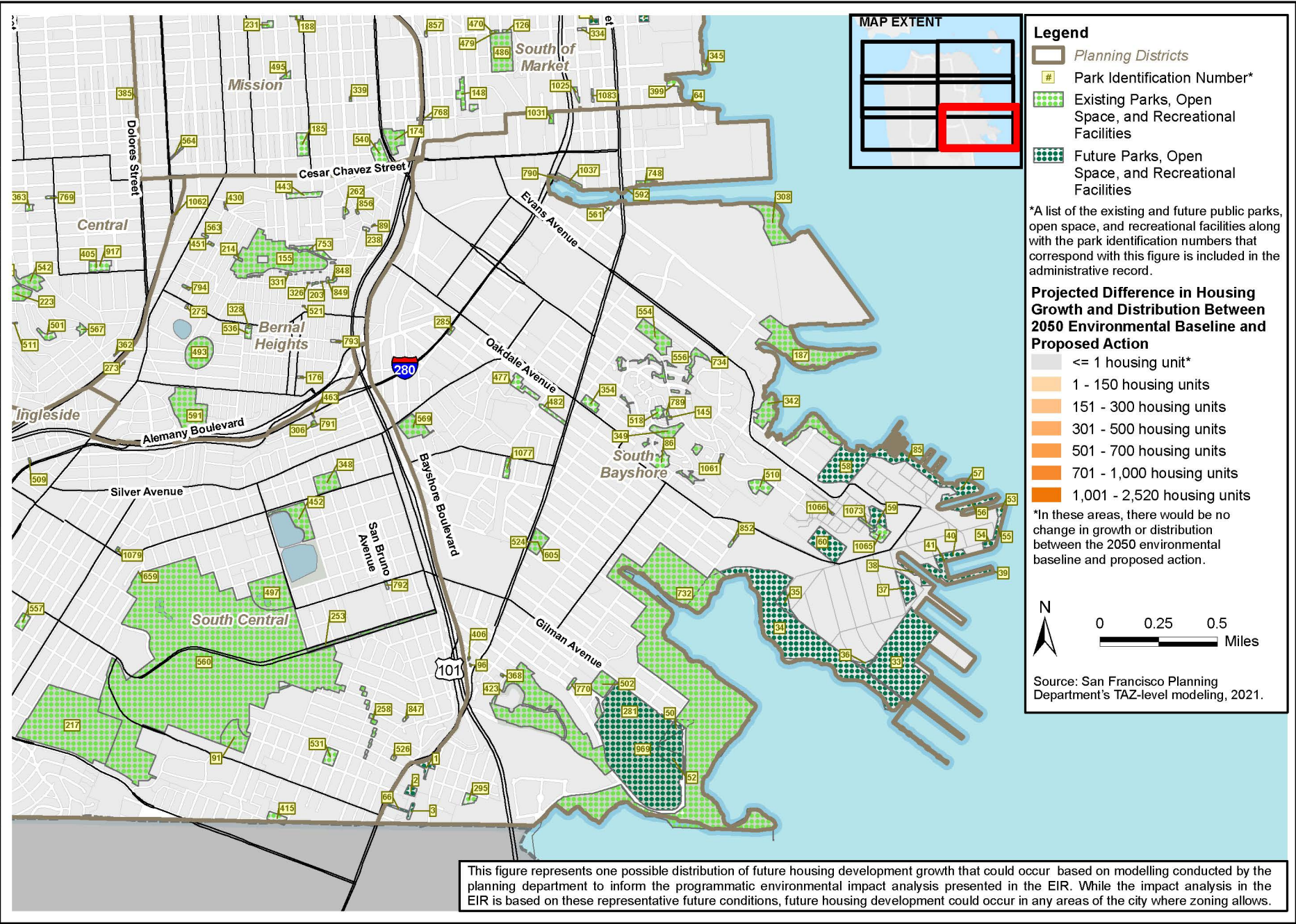
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ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to recreation associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

As described above, there are numerous recreational and open space resources throughout the city. The construction and operation of an additional 50,000 housing units by 2050 has the potential to affect these facilities by generating an increased demand for parks and recreational facilities. The analysis of the impacts of the housing element update related to recreational resources was conducted by determining whether the proposed action would result in substantial physical deterioration of recreational facilities in the city compared to the 2050 environmental baseline. Lastly, this analysis evaluates whether the anticipated impacts on recreational resources under the proposed action would require construction of new facilities compared to the 2050 environmental baseline.

Impacts and Mitigation Measures

Impact RE-1: The proposed action would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. (*Less than Significant*)

The proposed action would increase demand for recreational resources and open space in the city due to increases in population compared to the 2050 environmental baseline, as depicted in **Table 2-4**, p. 2-29, in Chapter 2, Project Description. Future development consistent with the housing element update and anticipated increases in population and demand for recreational facilities would affect recreational resources. The potential for secondary effects related to physical deterioration resulting from population increases and increased use under the housing element update is addressed in the discussion that follows.

Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the City and County of San Francisco (city) by 2050 compared to 2020 conditions. As described in **Table 2-4** in Chapter 2, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element by 2050. Because development under the housing element update would increase the number of new residents in the city, and population is the primary contributor to recreational demand, there would be increased demand for, and use of, both neighborhood parks and citywide recreational facilities.

The construction of 50,000 more housing units by 2050 under the housing element update compared to the 2050 environmental baseline is expected to generate an associated increase in demand for parks and recreational facilities from construction workers on lunch breaks, midday breaks, and after work. However, the increase in demand for recreational resources from construction workers would be considered temporary and would not be expected to persist upon the completion of the future development consistent with the housing element update.

The housing element update would increase housing production and shift a greater share of anticipated growth and the related demand for recreational and open space areas from the east side of the city to well-resourced areas along transit corridors and low-density areas that are primarily located on the west and north sides of the city. Approximately half of SFRPD, public works, and California State Park facilities are within 0.25 mile of the anticipated location of future development consistent with the housing element update. In addition, the majority of Golden Gate National Recreation Area facilities are within 0.25 mile of the anticipated location of future development consistent with the housing element update. Although all city recreational resources would experience increased demand as a result of the housing element update, including those in the eastern side of the city, such as Port facilities, TIDA, Candlestick State Recreation Area and McLaren Park, resources within 0.25 mile of the anticipated location of future development consistent with the housing element update would experience the largest increase in demand due to neighborhood uses.

Compared to the 2050 environmental baseline, facilities in the eastern portion of the city are anticipated to be affected less because an increased share of new housing development would be concentrated in the western and northern portions of the city instead of the eastern portion. Proportionally, there is more acreage of open

space in the western and northern portions of the city compared to the eastern portion of the city. By shifting a greater portion of growth to the western and northern portions of the city under the proposed action, the housing element update would concentrate growth in an area of the city with greater recreational resource capacity compared to the 2050 environmental baseline.

SFRPD has indicated that although recreational facilities in the western and northern portions of the city tend to be larger, more abundant, and able to serve greater geographical areas than recreational facilities in the eastern portion of the city, these facilities already experience high levels of demand that would be exacerbated by future development consistent with the housing element update compared to the 2050 environmental baseline. Additionally, SFRPD indicated that the increased demand in the western and northern portions of the city anticipated as a result of future development consistent with the housing element update would exceed the existing capacity of these recreational facilities.

To address ongoing and projected demand for recreation facilities from population growth, the SFRPD continually acquires new park land as needed and regularly renovates existing recreational facilities and parks. The SFRPD would acquire new park land and renovate existing facilities under both the 2050 environmental baseline and the proposed action to address changing recreational trends and anticipated increases in demand from population growth. The SFRPD has plans to establish 66 new recreational facilities throughout the city, six of which would be located in the western portion of the city and within 0.25 mile of future growth projected as a result of the proposed action.¹³¹ The remaining planned recreational facilities are in the eastern portion of the city.

Although recreational facilities in the western portion of the city tend to be larger, more abundant, and able to serve greater geographical areas than recreational facilities in the eastern portion of the city, according to the SFRPD, these facilities already experience service gaps that would be exacerbated by future development consistent with the housing element update compared to the 2050 environmental baseline.

Although projected growth as an result of the proposed action is anticipated to increase the use of open space and recreational facilities in the city, the SFRPD's practice of acquiring new open spaces and recreational facilities or expanding existing facilities where needed, is anticipated to be able to accommodate future demand from the increase in population associated with the proposed action. In addition, in accordance with General Plan Policy 1.4 of the Recreation and Open Space Element, the SFRPD performs regular maintenance on its parks, open spaces, and facilities to reduce the physical degradation that can occur with increased use. This general plan policy is implemented through the SFRPD Strategic Plan, which is updated annually and has a five-year planning horizon. Specifically, Objective 1.2 of the strategic plan directs the SFRPD to strength the quality of existing parks and facilities through 10 different policies. Such policies include Policy 1.2(d), "Continue to prioritize deferred maintenance renewals and discretionary capital resources in equity zone parks with below average park scores," and Policy 1.2(e), "Complete asset data collection to implement TMA Preventative

¹³¹ City and County of San Francisco, *GIS data showing existing and future recreational facilities, 2021*, <https://datasf.org/opendata/>, accessed March 25, 2022.

Maintenance model.” This practice would continue under the proposed action. This would result in a *less-than-significant* impact, and no mitigation is required.

Impact RE-2: The proposed action would not include recreational facilities but would require the construction or expansion of recreational facilities that would have an adverse physical effect on the environment. (*Less than Significant with Mitigation*)

New or expanded open spaces and recreational facilities may be required to accommodate future demand from residents and employees anticipated as an indirect result of the proposed action. As shown in **Figures 4.1-17a** through **4.1-17f**, pp. 4.1-100 through 4.1-105, and described under Impact RE-1, the proposed action would affect SFRPD, public works, Port, TIDA, California State Park, and Golden Gate National Recreation Area facilities citywide and increase demand on existing facilities in the western portion of the city compared to the 2050 environmental baseline.

As described under Impact RE-1, the SFRPD acquires new park land as needed and regularly maintains existing recreational facilities and parks to accommodate changing recreational trends and increased demand from population growth. Future development consistent the housing element update could result in the construction and operation of new or expanded open spaces and recreational facilities in the city by SFRPD in response to population and housing growth anticipated under the proposed action. Such open space and recreation facilities would be subject to project-level environmental review in accordance with CEQA at the time they are proposed. This project-level review would identify any significant environmental impacts that could result from the construction and operation of these facilities and would identify project-specific mitigation measures to lessen or avoid any significant impacts as feasible. While it is not possible to identify project-specific impacts and mitigation measures with certainty at this time, based on the available information and review of CEQA environmental documents for similar projects, the department anticipates that the construction of new or expanded open spaces and recreational facilities could have significant impacts, including temporary transportation, noise, and air quality impacts related to the use of heavy construction equipment, demolition, excavation, hauling, and construction activities. Depending on the specific location of the project sites, such projects could also have significant impacts on built environment historic resources, archeological resources, tribal cultural resources, paleontological resources, and biological resources. These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality. Therefore, the proposed action would result in a *less-than-significant impact with mitigation*.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-RE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on recreation. (*Less than Significant with Mitigation*)

As identified in Chapter 4, Environmental Setting and Impacts, the cumulative projects are largely located in the eastern portion of the city. The Waterfront Plan Update provides a long-range policy framework that will guide future port improvement projects, programs, and stewardship initiatives. The BART Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service and Pennsylvania Avenue Extension are transportation projects in the northeastern portion of the city and downtown core. Because future development consistent with the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to the west side of the city, localized and/or cumulative neighborhood recreation impacts on facilities on the east side of the city would be reduced compared to the 2050 environmental baseline. In addition, because the BART Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service and Pennsylvania Avenue Extension are primarily transportation projects, they are not expected to substantially increase use or degradation of neighborhood or citywide recreation facilities. Because the transportation projects would not add residences or a substantial number of new employees to the city, they are not anticipated to contribute significantly to cumulative recreation impacts in the city.

Future development consistent with the Waterfront Plan Update would add approximately 260 housing units and approximately 14,800 jobs in the eastern portion of the city—specifically, in the Fisherman's Wharf, Northeastern Waterfront, South Beach, Mission Bay, and Southern Waterfront communities. The increase in employees, residents, and hence public use of citywide recreational facilities under the Waterfront Plan Update would be largely addressed by goals and policies in the Waterfront Plan Update, which would promote public use of open space, enhancement and development of public access to waterfront areas, and increased use of existing, newly enhanced, or developed recreational facilities. Furthermore, increased demand for recreational facilities attributed to future development consistent with the Waterfront Plan Update would be concentrated in the eastern part of the city, whereas increased demand under the proposed action would be concentrated in the western part of the city. Therefore, cumulative impacts on recreation as a result of the construction or expansion of recreational facilities or

the degradation of such facilities associated with the increased demand attributed to the housing element update and future development consistent with the Waterfront Plan Update would be *less than significant*.

Public Services

ENVIRONMENTAL SETTING ¹³²

Figures 4.1-18a through 4.1-18d, pp. 4.1-112 through 4.1-115, show the existing fire stations, police stations, public libraries, and schools in the city.

FIRE PROTECTION

The San Francisco Fire Department (SFFD) serves an estimated population of 1.5 million.¹³³ Its services include fire suppression, fire prevention, and emergency medical services for residents, visitors, and workers within San Francisco's 49 square miles. In 2020, the SFFD responded 285,743 to emergencies.¹³⁴ The SFFD is divided into several divisions, as described in **Table 4.1-12**, p. 4.1-116.

The SFFD has approximately 1,700 firefighting and emergency medical personnel. With a 2019 population of 881,549,^{135,136} the city's ratio of uniformed fire personnel to residents was approximately 1.93 to 1,000.

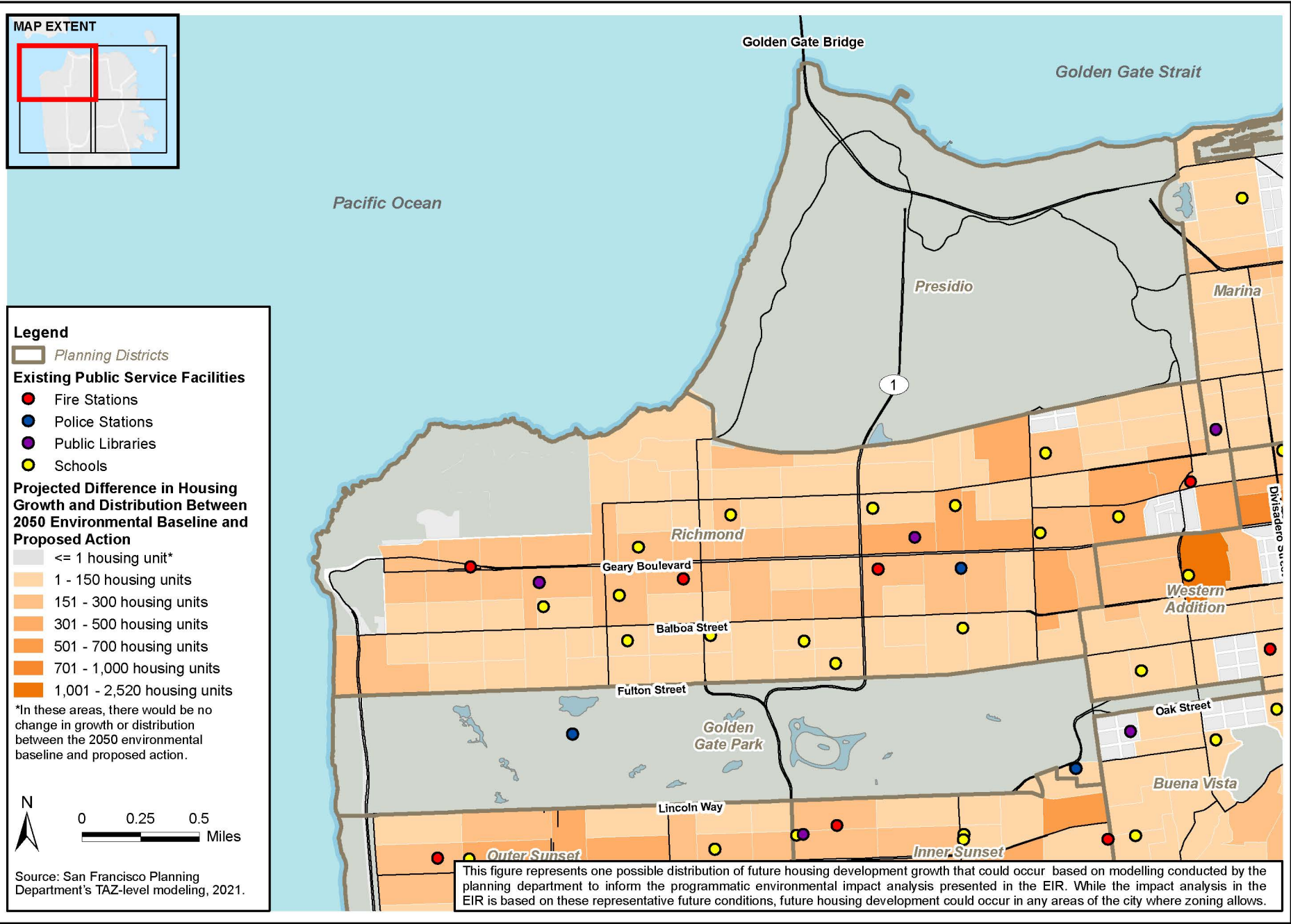
¹³² For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

¹³³ San Francisco Fire Department, *Our Organization*, 2021, <https://sf-fire.org/our-organization>, accessed August 19, 2021.

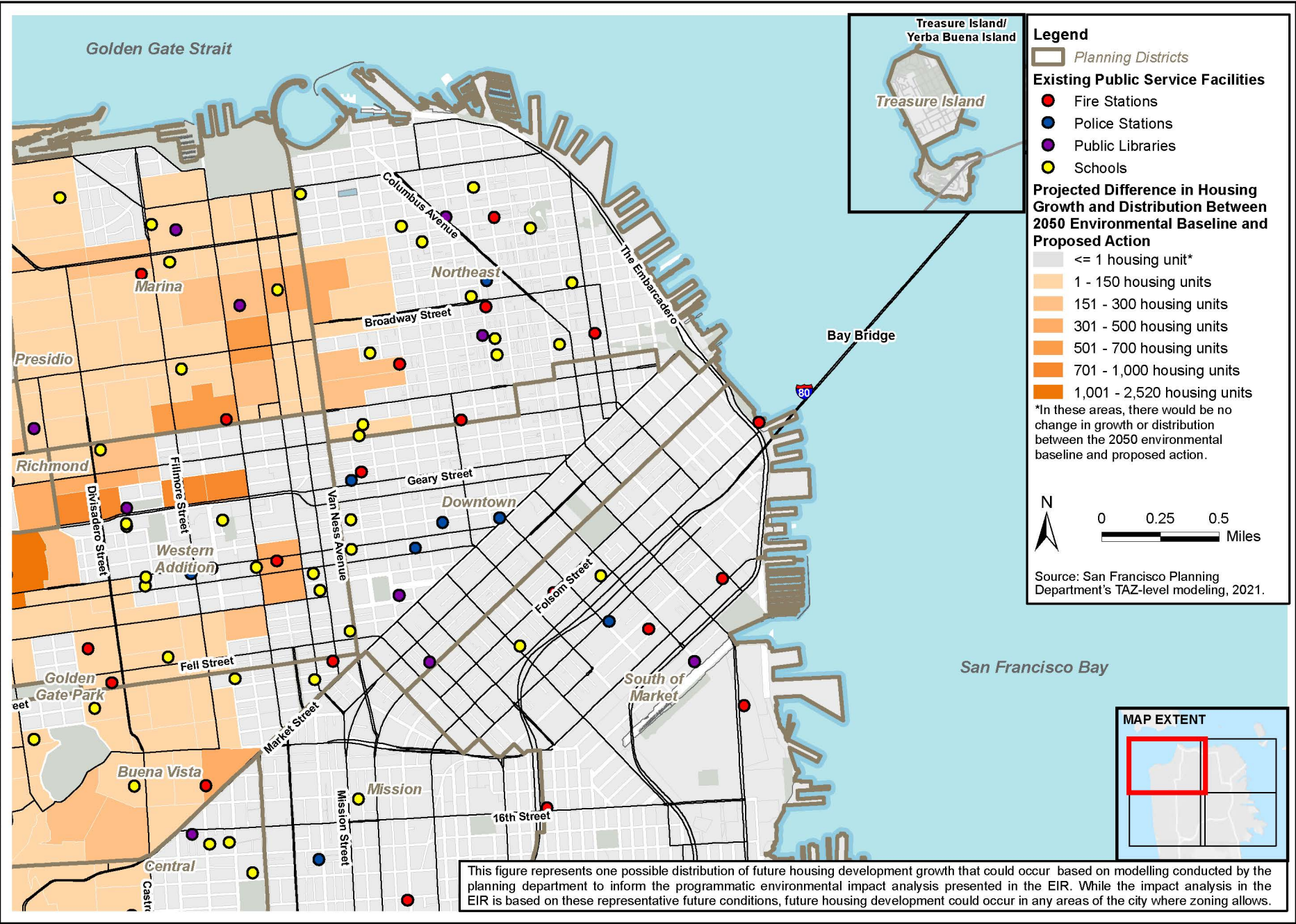
¹³⁴ San Francisco Fire Department, *Fire Department Calls for Service*, <https://data.sfgov.org/Public-Safety/Fire-Department-Calls-for-Service/nuek-vuh3/data>, accessed October 29, 2021.

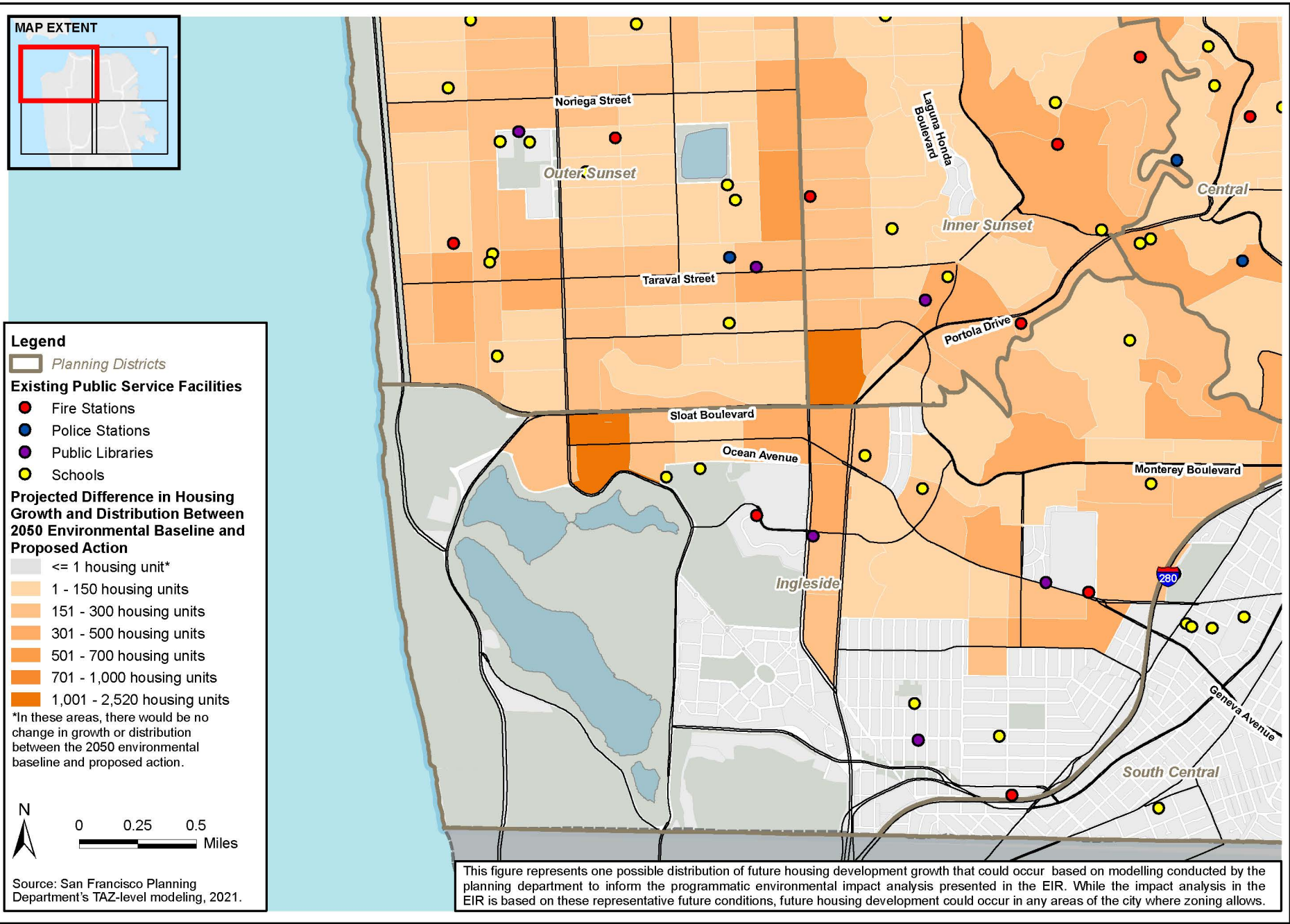
¹³⁵ San Francisco Fire Department, *San Francisco Fire Department 2017-2021 Strategic Plan*, <https://sf-fire.org/files/2021-03/SFFD%20Strategic%20Plan%20November%202017.pdf>, accessed October 29, 2021.

¹³⁶ U.S. Census Bureau, *QuickFacts San Francisco, California*, 2019, <https://www.census.gov/quickfacts/fact/table/sanfranciscocitycalifornia,US/PST045219>, accessed August 17, 2021.



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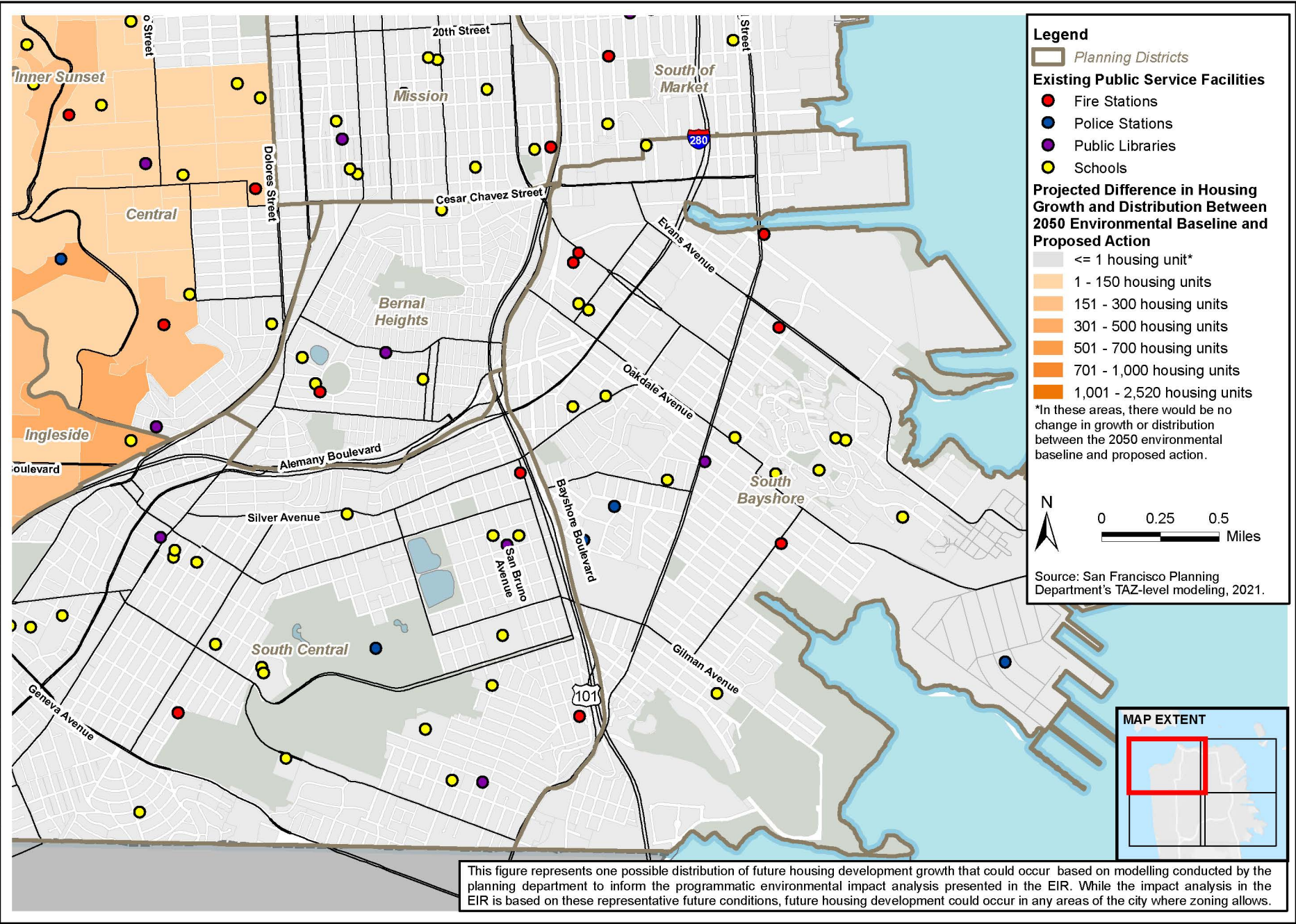


Table 4.1-12: Divisions within the San Francisco Fire Department

Division	Jurisdiction	Additional Information
Division 2	Downtown and Financial Districts, extending through the northwest boundaries of the city	Includes the majority of the city’s high-rise buildings as well as schools, hospitals, churches, community centers, commercial centers, historical landmarks, underground transportation systems, tunnels, and bridges. Densely populated.
Division 3	South of Market area, extending through the southwest boundaries of the city to southern border. Includes San Francisco International Airport, Treasure Island/Yerba Buena Island, and the Hunters Point Naval Shipyard as well as public transportation maintenance and repair yards and an extended area with port facilities	Residential and commercial buildings, underground construction, and wood-frame residential structures in densely populated neighborhoods such as the Mission district; the only heavy concentration of industrial occupancies in the city.
Airport Division	San Francisco International Airport community. Responsible for fire protection, fire prevention, code enforcement, emergency medical services, water rescue operations, hazardous materials abatement, community-based fire safety, fire extinguisher training, cardiopulmonary resuscitation (CPR), and automatic external defibrillator (AED) services and training	More than half a million passengers move through San Francisco International Airport every week; the passengers are serviced by three fire stations.
Emergency Medical Services Division	Countywide. Basic life support, advanced life support, first responder, emergency medical technician, and paramedic programs	In FY 2012–2013, the SFFD responded to more than 92,255 calls for emergency medical services and related services; 66,485 of the calls resulted in hospital transport by ambulance.
Divisions of Fire Prevention and Investigations	Countywide	Inspection of buildings and premises to ascertain and correct any conditions that have the potential to cause fire or contribute to a fire’s spread.
Homeland Security Division	Countywide. Homeland security and disaster response program	Develops and manages disaster response programs with the San Francisco Police Department; manages mass destruction/terrorism response programs, federal security grants, and the National Incident Management System.
Emergency Communications Division	9-1-1 operations and public safety dispatch services to San Francisco residents and visitors	--

Division	Jurisdiction	Additional Information
Support Services Division	Countywide	Consists of the Bureau of Engineering, Bureau of Equipment, Facilities and Management, and the Logistics Center.
Training Division	Countywide. Fire suppression and emergency medical services instruction to all members of the department	--

Source: San Francisco Fire Department, *San Francisco Fire Department Annual Report 2012–2013 (FY)*, <https://sf-fire.org/sites/default/files/FileCenter/Documents/3584-2012-2013.pdf>, accessed August 19, 2021.

Police Protection

The San Francisco Police Department (SFPD) is divided into five bureaus: Administration, Airport, Field Operations, Professional Standards and Principled Policing, and Special Operations. As of 2021, the number of sworn SFPD officers totaled 2,133, including 1,518 field officers.¹³⁷ In the first quarter of 2021, officers responded to approximately 148,100 calls for service and arrested more than 3,200 suspects.¹³⁸ Calls for services are categorized as Priority A, B, and C calls, with Priority A calls being the most urgent and Priority C calls taking the least precedent. The SFPD’s response time target for Priority A calls is 8 minutes. Priority B and C calls have response time targets of 20 minutes and 60 minutes, respectively.¹³⁹ In 2019 and 2020, the average response time for calls with the highest priority, such as reports of homicide, robbery, or crimes involving weapons, was 7.4 minutes, thereby achieving San Francisco’s target response time. The average response time for second-priority and third-priority calls in 2019 and 2020 was 21.71 and 71.71 minutes, respectively, which did not achieve San Francisco’s target response times.¹⁴⁰ Response times have remained largely consistent since 2016.

The Field Operations Bureau of the SFPD manages the Patrol Division and Investigations Bureau. It consists of 10 districts. The Patrol Division is divided into two groups: Metro Division and Golden Gate Division, both of which are supported by Field Operations Bureau headquarters staff. The Metro Division and Golden Gate Division oversee the 10 district stations. The Investigations Division is responsible for investigating and documenting personal and property crimes; preparing cases for prosecution by the District Attorney’s Office; carrying out the functions of the Special Investigations Bureau, Gang Task Force, Narcotics and Vice Division, Juvenile and Family Services Division, and Forensic Services Division; and working with federal, state, and local agencies on multi-jurisdictional investigations.

Schools

The San Francisco Unified School District (SFUSD) oversees the public school system in San Francisco (pre-K, transitional kindergarten, and kindergarten [K] through 12th grade) and is the primary public school provider in

¹³⁷ San Francisco Police Department, *SFPD Sworn Demographics by Rank*, 2021, <https://www.sanfranciscopolice.org/sites/default/files/2021-08/SFPDSwornDemographics-20210811.pdf>, accessed August 19, 2021.

¹³⁸ San Francisco Police Department, *Quarterly Activity and Data Report, Quarter 1*, 2021, <https://www.sanfranciscopolice.org/sites/default/files/2021-07/SFPD-QTR1QADR2021Report-20210711.pdf>, accessed August 19, 2021.

¹³⁹ City and County of San Francisco, *Police Response to Serious Incidents*, 2021, <https://sfgov.org/scorecards/public-safety/police-response-serious-incidents>, accessed August 19, 2021.

¹⁴⁰ Ibid.

the city, accommodating nearly 100 percent of public school enrollment and approximately 70 percent of overall school enrollment in the city. Other public school facilities that are not operated by SFUSD include court-sponsored facilities (e.g., correctional institutions, “ward of the court” facilities) and public charter schools. The SFUSD comprises 13 preschools and 105 schools that serve various grade levels (e.g., pre-K to 5, pre-K to 8, 6 to 8, and 9 to 13). In addition, SFUSD offers facilities to 16 public charter schools that operate within district boundaries.¹⁴¹ Enrollment within the SFUSD increased slightly between 2008 and 2017, and although a decline was observed during the 2020–2021 school year, student enrollment in the SFUSD is generally expected to continue to increase over the next decade.^{142,143}

During the 2020–2021 school year, approximately 53,000 students attended public schools or public charters in San Francisco.¹⁴⁴ In addition, there are approximately 300 private schools within the city, providing pre-K through 12th-grade classes.¹⁴⁵ These private schools include a range of specialized educational facilities, including childcare centers, preschools, religious institution, and Montessori programs. It is estimated that approximately another 23,455 students attend private schools within SFUSD’s enrollment area.¹⁴⁶

Currently, SFUSD has capacity for approximately 63,400 students in SFUSD facilities.¹⁴⁷ Although neighborhoods with a high population of school-age children generate a proportionally high level of demand for nearby schools, SFUSD currently assigns elementary students to schools according to a choice-based assignment system with tiebreakers. The choice-based assignment system with tiebreakers allows students to submit a ranked list of school choices and assigns students to their highest ranked choice based on space limitations. When the number of requests for a school is greater than the number of spaces available tiebreakers are instituted to determine enrollment.¹⁴⁸ This system ensures that student enrollment is distributed to facilities with adequate capacity to serve the educational needs of the students. However, in the future, SFUSD plans to transition enrollment for elementary-aged students to a geographically zone-based student assignment system to increase predictability regarding assignments to schools, which will be a reasonable distance from where families reside. The geographically zone-based system will allow incoming students and their families to submit a ranked list with schools in their zone. The assignment system will assign each student according to his or her ranked list of choices, diversity categories, and tiebreakers. The objectives of this new geographically zone-based student

¹⁴¹ California Department of Education, *School Directory*, 2021, <https://www.cde.ca.gov/SchoolDirectory/Results?Title=California%20School%20Directory&search=1&counties=38&status=1%2C2&types=0&nps=0&multilingual=0&charter=2&magnet=0&yearround=0&qdc=0&qsc=0&Tab=1&Order=0&Page=0&Items=0&HideCriteria=False&isStaticReport=False>, accessed October 29, 2021.

¹⁴² San Francisco Unified School District, *Growing Population Growing Schools*, August 31, 2016.

¹⁴³ Lapkoff & Gobalet Demographic Research, Inc., *Demographic Analyses and Enrollment Forecasts San Francisco Unified School District*, January 2020.

¹⁴⁴ San Francisco Unified School District, *Facts about SFUSD at a Glance*, 2021, <https://www.sfusd.edu/about-sfusd/facts-about-sfusd-glance>, accessed August 19, 2021.

¹⁴⁵ City and County of San Francisco. 2020. *DataSF-Schools*, <https://data.sfgov.org/Economy-and-Community/Schools/tpp3-epx2>, accessed November 9, 2021.

¹⁴⁶ California Department of Education, *2020–2021 Private School Affidavit Information*, 2021, <https://www.cde.ca.gov/ds/si/ps/>, accessed October 29, 2021.

¹⁴⁷ San Francisco Unified School District, *Growing Population Growing Schools*, August 31, 2016.

¹⁴⁸ San Francisco Unified School District, *Student Assignment Policy-Tiebreakers*, 2021, <https://www.sfusd.edu/schools/enroll/student-assignment-policy/tiebreakers>, accessed October 29, 2021.

assignment system are to promote diversity, predictability, and proximity during the assignment of elementary aged students.¹⁴⁹ This change will affect students applying to elementary school for the first time (not students who are already enrolled in school), and will go into effect in the 2024–2025 school year.

As of September 2021, SFUSD has plans to construct a new elementary school facility at Mission Bay that is scheduled to open in 2025. Additionally, SFUSD may construct two schools in Bayview and Treasure Island (one in each location) based on future need and demand; there are currently no plans or planned opening date for the future Bayview and Treasure Island school facilities. Where possible, SFUSD also considers renovating existing facilities to accommodate enrollment demand.¹⁵⁰

SFUSD collects school impact fees to mitigate development impacts that generate pupil growth (e.g., new housing). School impact fees apply to new construction projects and projects that increase the square footage of existing structures. Current fees charged by the SFUSD for new construction are listed by facility type in the San Francisco Citywide Development Impact Fee Register¹⁵¹ and are collected for any new residential development within city boundaries.

Libraries

The San Francisco Public Library (SFPL) consists of 28 branch libraries, the Main Library located in the Civic Center area, two bookmobile programs, and a virtual library. The citywide library holdings in fiscal year 2019–2020 included a collection size of 3,051,764, of which 1,693,672 collections are contained in the Main Library. During that period, the various libraries were visited by patrons 3,817,570 times, of which 947,862 visits were to the Main Library.¹⁵² Also during this time, the library system organized and hosted 12,009 events at which 298,850 visitors attended.¹⁵³ These events consisted of classes, lectures, panel discussions, author readings, exhibits, films, meetings, performances, celebrations, school visits, and summer reading programs. Libraries are open seven days a week under normal conditions (i.e., non-COVID conditions).

The SFPL system has established a goal to provide at least 0.6 square feet of library per resident of the city. According to analysis completed in July 2021 for the Southeast Framework: Community Facilities Analysis, the SFPL system provides 362,179 square feet of library space for the city's 809,116 users.¹⁵⁴ This results in an existing service ratio below the SFPL service goal. However, coordination with SFPL officials indicated that library demand does not scale linearly with population counts. San Francisco has one of the densest library systems in the country, with one branch for every 1.8 square miles. Meanwhile, the way SFPL patrons are accessing library resources is changing, with a noticeable upward trend in electronic materials circulation (more than 60 percent

¹⁴⁹ San Francisco Unified School District, *New Elementary School Student Assignment Policy*, 2021, <https://www.sfusd.edu/schools/enroll/student-assignment-policy/student-assignment-changes>, accessed January 5, 2022.

¹⁵⁰ San Francisco Unified School District, *Response to Questionnaire*, August 19, 2021.

¹⁵¹ City and County of San Francisco, *San Francisco Citywide Development Impact Fee Register*, 2020, https://sfplanning.s3.amazonaws.com/default/files/forms/Impact_Fee_Schedule.pdf, accessed August 19, 2021.

¹⁵² San Francisco Public Library, *FY 2019–20 Annual Report*, 2021, <https://sfpl.org/sites/default/files/2021-03/Systemwide-Statistics-2019-20.pdf>, accessed August 19, 2021.

¹⁵³ *Ibid.*

¹⁵⁴ U.S. Census Bureau, *QuickFacts San Francisco, California*, 2019, <https://www.census.gov/quickfacts/fact/table/sanfranciscocitycalifornia,US/PST045219>, accessed August 17, 2021.

increase compared to before the pandemic). SFPL officials indicated that they plan to develop a strategic plan in 2022 to examine evolving library service models and determine if and where additional locations are needed.

Parks

The SFRPD, public works, and state and federal agencies own and operates parks within the city. Parks and recreational resources are discussed under Recreation in this section.

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to public services associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criterion

The proposed action would have a significant effect if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any public services, such as fire protection, police protection, schools, parks, or other public facilities

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

Effects on public services could result as anticipated future growth consistent with the proposed action is developed, which would increase the demand for public services and public facilities in the city. Because the housing element update would not result in any direct physical changes to the environment, and all potential impacts from the housing element update would result in reasonably foreseeable changes, potential impacts on public services are evaluated at a programmatic level.

Impacts and Mitigation Measures

Impact PS-1: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency medical services. (*Less than Significant with Mitigation*)

Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. As described in **Table 2-4**, p. 2-29, in Chapter 2, Project Description, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element by 2050. Because future development consistent with the housing element update would increase the number of new residents in the city, and population is the primary contributor to demand for public services, fire and medical service facilities throughout the city are anticipated to experience increases in demand and potential increases in response times due to additional congestion.

As the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas that are primarily located on the west and north sides of the city, fire and emergency medical facilities in the west and north sides of the city would experience increased demand compared to the 2050 environmental baseline. From some perspectives (e.g., response time), impacts on fire and emergency medical response times under the proposed action would be less than those anticipated under 2050 environmental baseline due to the existing and forecasted level of congestion as it relates to emergency vehicle access in the eastern portion of the city compared to the western portion of the city.¹⁵⁵ However, only approximately 25 of the 45 SFFD fire stations are located within the western portion of the city, and these stations generally serve larger areas than stations located in the eastern portion of the city.¹⁵⁶ As a result, increases in demand and the number of calls for service anticipated under the housing element update are still expected to have a substantial effect on fire protection and emergency medical service facilities in the western portion of the city, similar to what is expected for fire protection facilities in the eastern portion of the city under the 2050 environmental baseline. Although new development and the related population increase could increase the number of calls for service, the increase would be gradual and incremental over the approximately 30-year

¹⁵⁵ San Francisco County Transportation Authority, *Congestion Management Program*, 2019, https://www.sfcta.org/sites/default/files/2019-12/SFCTA_Congestion_Management_Program_FINAL_Report_2019-12-10.pdf, December 2019, accessed January 5, 2022.

¹⁵⁶ San Francisco Fire Department, *Find Your Station*, 2021, <https://sf-fire.org/find-your-station>, accessed August 19, 2021.

horizon of the proposed action. Nevertheless, the increase in demand for fire protection and emergency medical services as a result of the housing element update may require the need for additional facilities in the western portion of the city.

To accommodate the anticipated increase in demand for fire protection and emergency medical services as a result of future development consistent with the proposed action, the SFFD would be expected to construct new or expand existing fire protection and medical facilities. The SFFD conducts ongoing assessments of its service capacity and response times to determine where there is a need for additional facilities and would continue to do so in response to projected growth citywide under the housing element update. Any new or expanded fire protection facilities necessary to serve growth anticipated as a result of the proposed action would be subject to project-level environmental review in accordance with CEQA at the time that it is proposed. These project-level reviews would identify any significant environmental impacts that could result from the construction and operation of these facilities and would identify project-specific mitigation measures to lessen or avoid any significant impacts as feasible. While it is not possible to identify project-specific impacts and mitigation measures with certainty at this time, based on the available information and review of CEQA environmental documents for similar projects, the department anticipates that the construction of new or expanded fire protection facilities could have significant impacts, including temporary transportation, noise, and air quality impacts related to the use of heavy construction equipment, demolition, excavation, hauling, and construction activities. Depending on the specific location of the project sites, such projects could also have significant impacts on built environment historic resources, archeological resources, tribal cultural resources, paleontological resources, and biological resources. These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality. Therefore, the proposed action would result in a *less than significant impact with mitigation*.

Impact PS-2: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for police protection. (*Less than Significant with Mitigation*)

Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. As described in **Table 2-4**, p. 2-29, in Chapter 2, Project

Description, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element by 2050. Because future development consistent with the housing element update would increase the number of new residents in the city, and population is the primary contributor to demand for public services, police services throughout the city are anticipated to experience increases in demand.

As the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas that are primarily located on the west and north sides of the city, police facilities in the west and north sides of the city would experience increased demand compared to the 2050 environmental baseline. To accommodate the increase in demand from residents anticipated as a result of future development consistent with the proposed action, the SFPD would be expected to construct new or expand existing police facilities. The SFPD conducts ongoing assessments of its service capacity and response times to determine where there is a need for additional facilities and will continue to do so in response to projected growth citywide under the housing element update. Any new or expanded police facilities necessary to serve growth anticipated as a result of the proposed action would be subject to project-level environmental review in accordance with CEQA at the time that it is proposed. These project-level reviews would identify any significant environmental impacts that could result from the construction and operation of these facilities and would identify project-specific mitigation measures to lessen or avoid any significant impacts as feasible. While it is not possible to identify project-specific impacts and mitigation measures with certainty at this time, based on the available information and review of CEQA environmental documents for similar projects, the department anticipates that the construction of new or expanded police facilities could have significant impacts, including temporary transportation, noise, and air quality impacts related to the use of heavy construction equipment, demolition, excavation, hauling, and construction activities. Depending on the specific location of the project sites, such projects could also have significant impacts on built environment historic resources, archeological resources, tribal cultural resources, paleontological resources, and biological resources. These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update, and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality. Therefore, the proposed action would result in a *less than significant impact with mitigation*.

Impact PS-3: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios or other performance objectives for schools. *(Less than Significant with Mitigation)*

Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. As described in **Table 2-4**, p. 2-29, in Chapter 2, Project Description, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element by 2050. Because future development consistent with the housing element update would increase the number of new residents in the city, and population is the primary contributor to demand for public services, school facilities throughout the city are anticipated to experience increases in demand.

Future development consistent with the housing element update is projected to consist of approximately 40 percent affordable housing units and approximately 60 percent market-rate units, while housing developed consistent with the 2050 environmental baseline is projected to consist of approximately 27 percent affordable housing units and approximately 73 percent market-rate units. The SFUSD engaged demographers to develop student yield rates for public school enrollment by housing type, based on recently built residential development in San Francisco. The results indicate a public school student generation rate of 0.5 student per new housing unit in 100 percent affordable developments and 0.01 student per unit in new market-rate housing developments, including those developments with on-site inclusionary units.¹⁵⁷ **Table 4.1-13** identifies the net change in housing units from 2020 conditions for both the proposed action and 2050 environmental baseline as well as the resulting increase in students attributable to future development consistent with the housing element update and the 2050 environmental baseline.

Table 4.1-13: Student Yield Projections

Scenario	2020 Conditions	2050 Conditions		
	Housing Units	Net Change (Compared to 2020 Conditions)	Student Yield	Enrollment Increase (Compared to 2020 Conditions)
2050 Environmental Baseline	407,000	+101,000	+14,525	27%
Proposed Action	407,000	+151,000	+31,106	59%

Sources: Student yield was calculated by the department using student generation rates provided in Lapkoff & Gobalet Demographic Research, Inc., Demographic Analyses and Enrollment Forecasts San Francisco Unified School District, January 10, 2020. Based on information provided by San Francisco Unified School District, personal communication, request for information from the San Francisco Unified School District for the San Francisco Housing Element 2022 Update, July 26, 2021.

¹⁵⁷ The student generation rates are based on existing data provided by SFUSD but is used solely for the purpose of this analysis.

According to SFUSD, public schools within the city currently have capacity for approximately 63,400 students. Under the 2050 environmental baseline, an estimated student capacity of approximately 67,500 would be needed to serve anticipated growth (53,000 existing enrollment plus 14,525 new enrollment), while an estimated student capacity of approximately 84,100 would be needed to serve growth resulting from the housing element update (53,000 existing enrollment plus 31,106 new enrollment). However, not all demand for additional student enrollment generated under the 2050 environmental baseline or future conditions under the housing element update would be for public schools. To estimate public school student generation, a public school student generation rate of 0.5 student per new housing unit in 100 percent affordable developments and 0.01 student per unit in new market-rate housing developments, including those developments with on-site inclusionary units, was used based on existing SFUSD data. This analysis assumes that the current distribution of students between public schools and private schools, approximately 69 percent versus approximately 31 percent, respectively, would remain consistent under the 2050 environmental baseline and the housing element update.

The housing element update would increase housing production and shift a greater share of anticipated growth and associated demand for student capacity from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. In contrast, under 2050 environmental baseline conditions, the increase in demand for student capacity would occur primarily in the east side of the city. In addition, SFUSD will transition to a new zone-based student assignment system that will assign elementary students to schools closer to their residences. As a result of the anticipated increased enrollment demand on school facilities, SFUSD may not have adequate capacity within its existing facilities to accommodate new students generated by housing growth projected under the housing element update. Additionally, existing private schools within the city may also not have adequate capacity to accommodate new students generated by future development consistent with the housing element update.

To accommodate anticipated future demand, SFUSD and private schools within the city may construct new or expanded school facilities. For public school facilities, SFUSD conducts ongoing assessments of its enrollment capacity to adequately accommodate anticipated student demand and would continue to do so in response to projected development consistent with the housing element update. Private school facilities generally operate independently of one another, and it is assumed they would also assess their enrollment capacity independently in response to future needs. These assessments would identify where there is a need for the new or expanded private and public-school facilities necessary to serve anticipated growth. Any new or expanded school facilities required to serve the future development consistent with the housing element update would be subject to project-level environmental review in accordance with CEQA at the time that it is proposed. These project-level reviews would identify any significant environmental impacts that could result from the construction and operation of these facilities and would identify project-specific mitigation measures to lessen or avoid any significant impacts as feasible.

For public schools, SFUSD would be the lead agency for any project-level environmental review associated with new or expanded public school facilities and would be responsible for identifying project-specific mitigation measures to lessen or avoid any significant impacts as feasible. For private schools, the city would serve as the lead agency. While it is not possible to identify project-specific impacts and mitigation measures at this time, based on the available information and review of CEQA environmental documents for similar projects, the department

anticipates that the construction of new or expanded school facilities could have significant impacts, including temporary transportation, noise, and air quality impacts related to the use of heavy construction equipment, demolition, excavation, hauling, and construction activities. Depending on the specific location of the project sites, such projects could also have significant impacts on built environment historic resources, archeological resources, tribal cultural resources, paleontological resources, and biological resources. These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality.

With the incorporation of applicable mitigation measures, similar to those identified in this EIR, the impacts associated with the construction of new or expanded public and private school facilities required to accommodate anticipated future demand under the proposed action are anticipated to be *less than significant impact with mitigation*.

Impact PS-4: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios or other performance objectives for libraries. (*Less than Significant with Mitigation*)

Under the proposed action, the department projects approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. As described in **Table 2-4**, p. 2-29, in Chapter 2, Project Description, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element by 2050. Because future development consistent with the housing element update would increase the number of new residents in the city, and population is the primary contributor to demand for public services, library facilities throughout the city are anticipated to experience increases in demand.

Since individual libraries within the SFPL system offer different services, programs, or spaces residents may choose to use libraries throughout the city, not just those in proximity to their homes. Therefore, impacts related to the additional demand for library services generated by new development consistent with the proposed action would increase demand for libraries and library services throughout the whole city compared to the 2050 environmental baseline. The SFPL currently has established a library service target of 0.6 square feet of library

per resident, but that figure is not used in isolation to determine whether San Francisco needs additional facility space as library demand does not scale directly in line with population counts. Instead, the SFPL conducts ongoing assessments of library and collections use to acquire community feedback, determine changing expectations, and/or the need for other service changes that could affect the needs for facilities in the future. SFPL currently has plans to replace the existing Ocean View branch facility with a larger facility on Brotherhood Way, resulting in a net gain in library space in the city totaling approximately 15,000 square feet. In addition, SFPL is exploring complementary service technologies to extend the reach of library services, including three collection vending sites to bring materials (e.g., holds and small collections) to more distant locations.¹⁵⁸ The SFPL would continue to assess ongoing library needs in response to projected growth citywide over the lifetime of the housing element update. This assessment could identify the need for additional facilities or collections as a result of growth within the city under the housing element update compared to the 2050 environmental baseline.

Any new or expanded library facilities determined to be needed by SFPL to serve new development resulting from the proposed action would be subject to project-level environmental review in accordance with CEQA at the time that it is proposed. These project-level reviews would identify any significant environmental impacts that could result from the construction and operation of these facilities and would identify project-specific mitigation measures to lessen or avoid any significant impacts as feasible. While it is not possible to identify project-specific impacts and mitigation measures with certainty at this time, based on the available information and review of CEQA environmental documents for similar projects, the department anticipates that the construction of new or expanded library facilities could have significant impacts, including temporary transportation, noise, and air quality impacts related to the use of heavy construction equipment, demolition, excavation, hauling, and construction activities. Depending on the specific location of the project sites, such projects could also have significant impacts on built environment historic resources, archeological resources, tribal cultural resources, paleontological resources, and biological resources. These impacts would be generally similar to the impacts identified in this EIR that could result from the construction and operation of future development projects consistent with the housing element update and would be subject to the same or similar regulatory requirements and mitigation measures, as applicable. Such mitigation measures could include those identified in this EIR, including: Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality. Therefore, the proposed action would result in a *less than significant impact with mitigation*.

¹⁵⁸ San Francisco Planning Department, personnel communication, request for information from the San Francisco Public Library for the San Francisco Housing Element 2022 Update, July 6, 2021.

Impact PS-5: The proposed action would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for parks. *(Less than Significant with Mitigation)*

The housing element update's impacts on parks and recreational resources are discussed in detail under Impact RE-2, above. With implementation of mitigation measures (e.g., Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance, Mitigation Measure M-CR-2b: Archeological Monitoring Program, Mitigation Measure M-CR-2c: Archeological Testing Program, Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, in Section 4.2, Cultural Resources; Mitigation Measure M-TCR-1: Tribal Notification and Consultation, in Section 4.3, Tribal Cultural Resources; Mitigation Measure M-NO-1: Construction Noise Control, Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, and Mitigation Measure M-NO-3b: Prevent Damage to Vibration-Sensitive Equipment, in Section 4.5, Noise and Vibration, as well as Mitigation Measure M-AQ-3: Construction Air Quality, in Section 4.6, Air Quality), the proposed action would result in a *less than significant impact with mitigation*.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-PS-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on public services. *(Less than Significant)*

As identified in Chapter 4, Environmental Setting and Impacts, the cumulative projects are largely in the eastern portion of the city. The Waterfront Plan is a planning-level document that would promote mixed-use development along the waterfront to host a diversity of activities and people while preserving the waterfront's historic character and its function as a port. The BART Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service and Pennsylvania Avenue Extension are transportation projects in the northeastern portion of the city and downtown core. Because the BART Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service and Pennsylvania Avenue Extension are transportation projects, they would not increase demand for fire, police, school, library, or park services

substantially. Therefore, these projects would not contribute to any potential cumulative impacts that could result from the construction or operation of new or expanded public service facilities.

Future development consistent with the Waterfront Plan Update would add approximately 260 housing units and 14,800 jobs to the eastern portion of the city, in the Fisherman's Wharf, Northeastern Waterfront, South Beach, Mission Bay, and Southern Waterfront communities. The increase in the number of employees and residents, and hence the use of fire, police, school, library, and park services, under the Waterfront Plan Update would contribute to increased demand for public services within the city. However, the demand for public services generated by future development consistent with the Waterfront Plan Update would be concentrated in the eastern part of the city, whereas increased demand under the proposed action would be concentrated in the western part of the city. Impacts related to the additional demand for library services generated by new development consistent with the proposed action would increase demand for libraries and library services throughout the whole city; however, any new or expanded library facilities determined to be needed by SFPL to serve new development resulting from the proposed action would be subject to project-level environmental review in accordance with CEQA at the time that it is proposed. Therefore, cumulative impacts on public services as a result of the construction or expansion of public service facilities attributed to the housing element update and future development consistent with the Waterfront Plan Update would be *less than significant*.

Biological Resources

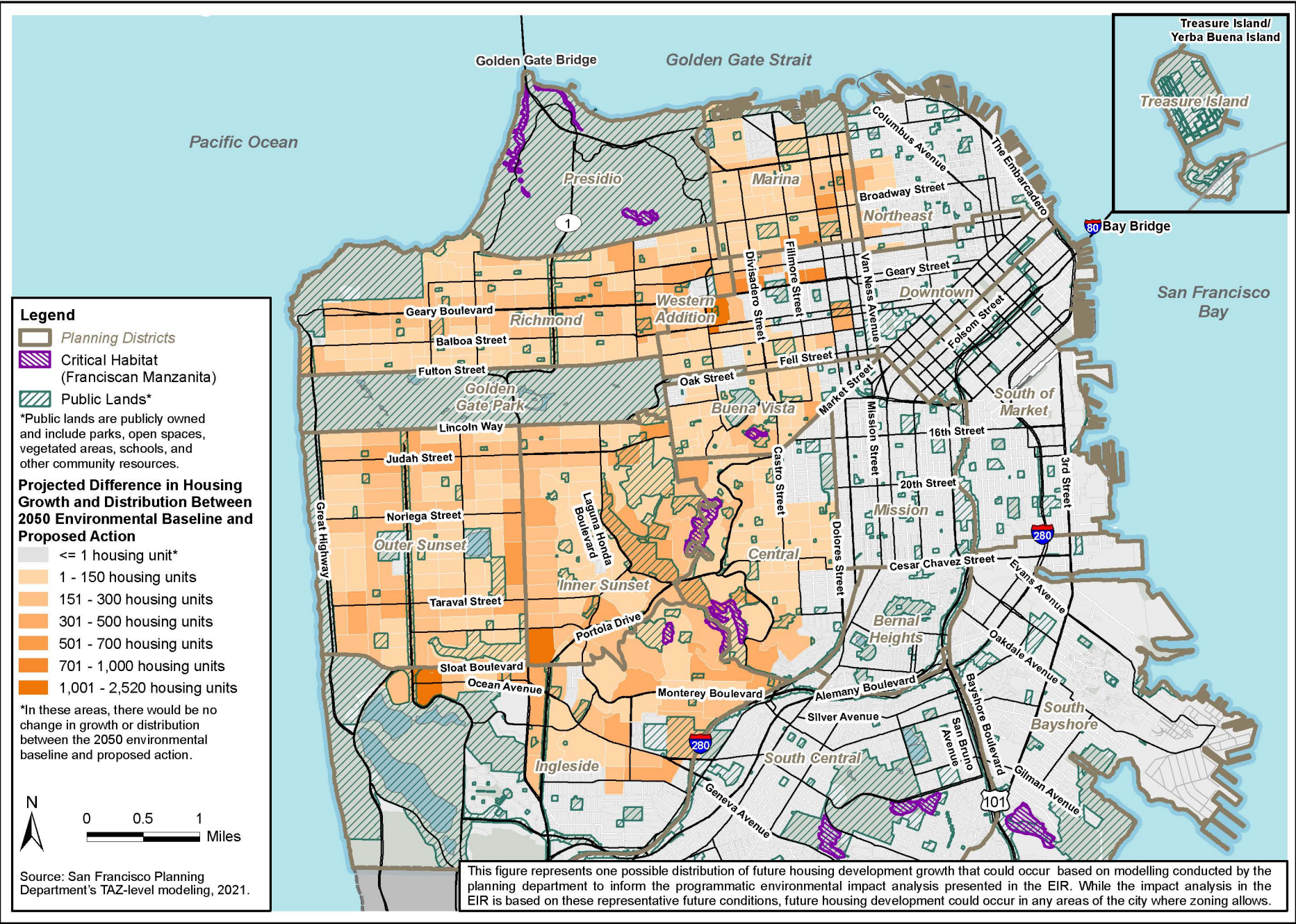
Information supporting this analysis of biological resources impacts is included in Appendix E of this EIR.

ENVIRONMENTAL SETTING¹⁵⁹

LANDSCAPE

San Francisco is a highly developed urban environment with limited habitat value for native plants and wildlife. Some of the vegetated areas and open spaces scattered throughout the city provide remnant habitats for native plants and wildlife, although most such areas are fragmented and highly degraded because of physical modifications, the presence of non-native and invasive species, and proximity to dense urban development. Vegetated areas and open spaces on the east side of the city are small and isolated. Vegetated areas and open spaces in the central and southern portions of the city are larger, with some connectivity between patches of vegetated areas. Most of the vegetated areas and open spaces in the city are west of U.S. 101, consisting primarily of SFRPD lands (e.g., Golden Gate Park, Lake Merced Park, McLaren Park) and federally owned lands (e.g., Fort Funston, Fort Mason, Sutro Heights, China Beach, the Presidio) (see **Figure 4.1-19**). The areas within the northeastern boundaries of the city (e.g., north of Cesar Chavez Street and west of Interstate 280) contain scattered amounts of vegetation within small, non-contiguous areas. Candlestick Point State Recreation Area and the surrounding lands in the southeastern portion of the city (e.g., east of U.S. 101 and south of Interstate 280) contain native habitat and small patches of vegetation.

¹⁵⁹ For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.



Remnant riparian habitat and other sensitive natural communities, as defined by the California Department of Fish and Wildlife¹⁶⁰ (CDFW), are present in some vegetated areas and open spaces. These include sand dunes, serpentine grassland, oak woodland, redwood forest, coastal dune scrub and coastal prairie, and riparian areas.¹⁶¹ Sensitive natural communities are characterized as plant assemblages with unique constituent components. They are restricted in distribution and considered locally rare. Such communities have the potential to support special-status plant or wildlife species and/or receive regulatory protection. The habitat values of the areas vary. Most are used as recreational open spaces by residents and visitors. Some vegetated areas, such as the Presidio, support riparian ecosystems, freshwater wetlands, and U.S. Fish and Wildlife Service– (USFWS) designated critical habitat (Figure 4.1-19). Critical habitat for Franciscan manzanita,¹⁶² which is federally listed as endangered, occurs in the Presidio, Corona Heights Park, Twin Peaks, Glen Canyon Park, Mt. Davidson Park, McLaren Park, and Bayview Park. Regular human use affects habitats in the city. Many vegetated areas and open spaces are degraded because of fragmentation, isolation, invasive and non-native species, proximity to active roadways and urban development, and high levels of human activity. Numerous creeks once traversed the city, generally flowing from inland hills to San Francisco Bay or the Pacific Ocean; however, all of these creeks and riparian habitat areas have been highly modified by urban development, and the majority have been undergrounded and/or combined with the sewer system.

In the city, remnant riparian habitat exists at Upper Islais Creek in Glen Canyon Park, Pine Lake in Pine Lake Park, Yosemite Creek in McLaren Park, the Presidio, and Lake Merced.¹⁶³ Willow riparian woodland can be found along Lobos Creek, along Mountain Lake, and in the El Polin Spring/Tennessee Hollow area (Figure 4.1-20).¹⁶⁴ Oak riparian woodland is also present at Lobos Creek. Riparian scrub habitat is found at Mountain Lake and Tennessee Hollow. Other waterways within the city that may support remnant riparian habitat include Mission Creek and tributaries to Lake Merced. Riparian ecosystems provide habitat for a variety of plants and animals, including resident and migratory bird species, urban wildlife, and native and rare species.¹⁶⁵

Freshwater ponds and lakes used for passive recreation can be found at Lake Merced, managed by SFRPD, Mountain Lake, managed by the Presidio Trust, and lakes in Golden Gate Park, including Mallard Lake, Metson Lake, Spreckels Lake, Chain of Lakes, Stow Lake, Lloyd Lake, Elk Glen Lake, and Alvord Lake, managed by SFRPD. Estuarine and marine wetland habitat exists along portions of the city’s eastern shoreline.¹⁶⁶ Remnant oak woodland, grassland, and coastal scrub communities, as well as saltwater wetlands, are scattered throughout various locations, such as McLaren Park and Yosemite Slough.

¹⁶⁰ California Department of Fish and Wildlife, *California Sensitive Natural Communities List*. Wednesday, August 18, 2021, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline>, accessed: October 25, 2021.

¹⁶¹ SF Environment, *Ecosystems*, <https://sfenvironment.org/ecosystems/overview/ecosystems>, accessed: October 24, 2021.

¹⁶² U.S. Fish and Wildlife Service, *Critical Habitat Mapper – Critical Habitat for Threatened and Endangered Species*, <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>, accessed: July 19, 2021.

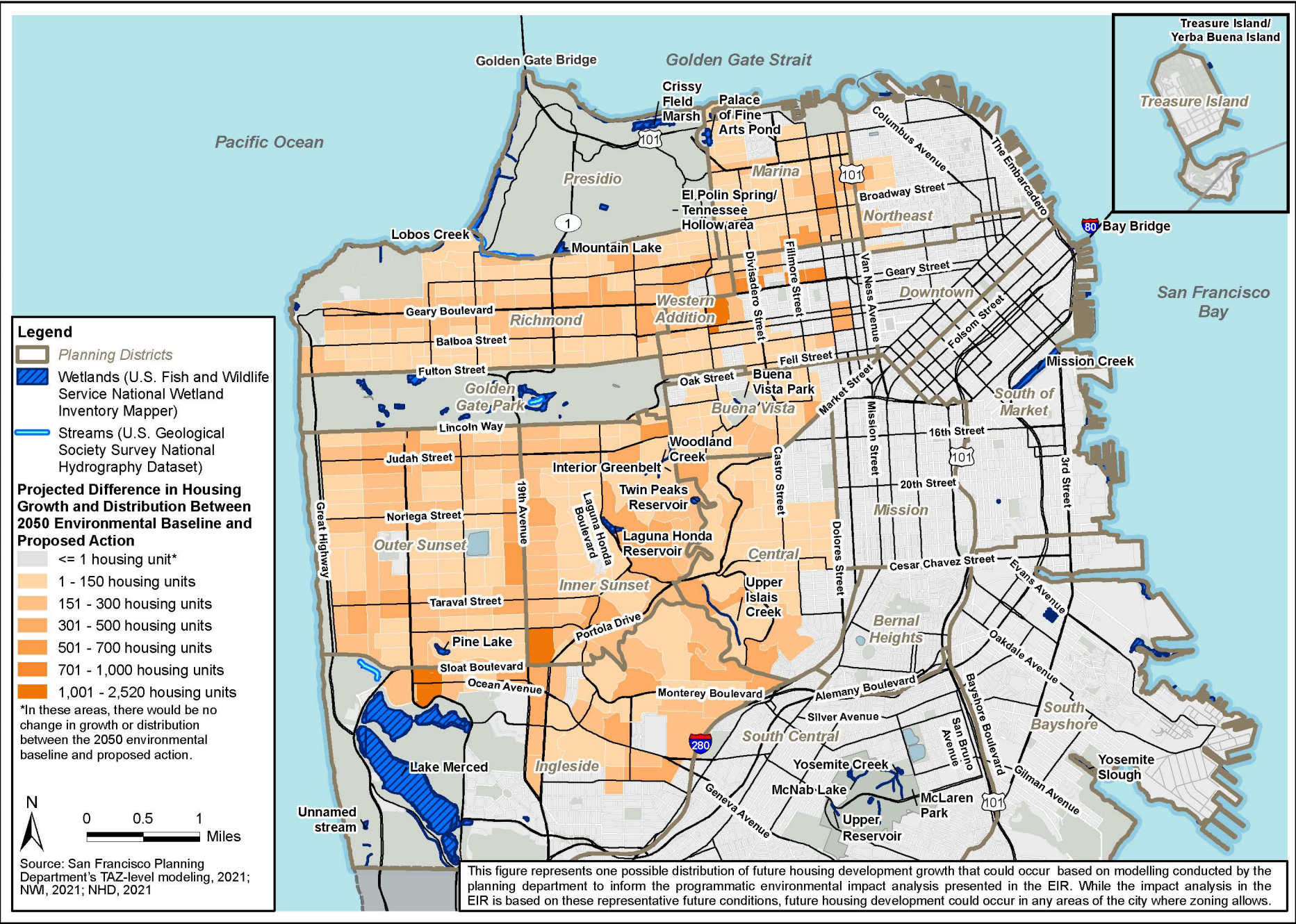
¹⁶³ SF Environment, *Ecosystems*, <https://sfenvironment.org/ecosystems/overview/ecosystems>, accessed: October 25, 2021.

¹⁶⁴ SF Environment, *Ecosystems*, <https://sfenvironment.org/ecosystems/overview/ecosystems>, accessed: October 24, 2021.

¹⁶⁵ California Department of Fish and Wildlife, *Special Animals List*, October 2021, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>, accessed: December 16, 2021.

¹⁶⁶ U.S. Fish and Wildlife Service, National Wetlands Inventory, *Wetland Mapper, Surface Waters and Wetlands*, <https://www.fws.gov/wetlands/data/Mapper.html>, accessed: July 18, 2021.

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Ornamental, landscape, and ruderal vegetation (e.g., street trees), which are not considered sensitive natural communities, are present on private property, within public lands (e.g., parks and open space), and along public rights-of-way. Landscaped vegetation in the city includes native and non-native tree and shrub species, such as London plane, Monterey pine, coast live oak, olive, coast redwood, Canary Island date palm, Douglas fir, Santa Rosa plum, and Santa Cruz ironwood trees.¹⁶⁷ Sensitive and non-sensitive vegetation communities can provide wildlife habitat and support a variety of insects, amphibians, reptiles, birds, and small mammals. Common wildlife species documented within the city include American bullfrog, western fence lizard, common raven, American crow, mourning dove, house sparrow, common pigeon, red-tailed hawk, Virginia opossum, striped skunk, raccoon, and coyote.^{168,169}

The city is within the Pacific Flyway, a north/south-oriented path stretching from Alaska to Patagonia that many species of birds migrate along as they travel between breeding and overwintering locations. The diverse habitats of the San Francisco Bay Area and the city on the Pacific Flyway attracts many species of birds. Nonmigratory birds are also found in San Francisco. Approximately 400 species of birds, both migratory and year-round species, have been documented in the city.^{170,171}

ARTIFICIAL LIGHTING AND BIRD STRIKES

Artificial lighting, particularly artificial lighting at night, can contribute to bird collisions risks. Nighttime lighting has the potential to impact migratory birds since many migratory birds are nocturnal migrants.¹⁷² Studies show that birds are attracted to artificial lights, which may disrupt their behavioral patterns or cause collision-related fatalities.¹⁷³ Buildings on key migratory routes, such as the Pacific Flyway, may pose greater risks than those at other locations. Research suggests that bird collisions increase as light emissions increase. Weather also increases risks. Nights with heavy cloud cover and/or precipitation are likely to result in high numbers of collisions.¹⁷⁴

¹⁶⁷ San Francisco Public Works, *Street Tree Map, San Francisco Treey Inventory*, 2021, <https://storymaps.arcgis.com/stories/45c3573f1b58418cb13bed3f0cdaef0c>, accessed: July 18, 2021.

¹⁶⁸ SF Environment, *Local Plants and Animals in San Francisco Neighborhoods*, <https://sfenvironment.org/green-connections-local-plants-animals-san-francisco-neighborhoods>, accessed: October 25, 2021.

¹⁶⁹ San Francisco Recreation and Parks Department, *Urban Wildlife*, <https://sfrecpark.org/1399/Urban-Wildlife>, accessed: October 25, 2021.

¹⁷⁰ Kay, Jane, *San Francisco Is a Bird Watcher's Paradise*, *San Francisco Chronicle*, February 23, 2009.

¹⁷¹ SF Environment, *San Francisco: America's Urban Birding Paradise*, <https://sfenvironment.org/news/update/san-francisco-americas-urban-birding-paradise>, accessed: October 25, 2021.

¹⁷² Ogden, L.J., *Collision Course: The Hazards of Lighted Structures and Windows to Migrating Birds. A Special Report for the World Wildlife Fund Canada and the Fatal Light Awareness Program*, September 1996, <https://tethys.pnnl.gov/sites/default/files/publications/Ogden1996.pdf>, accessed: October 24, 2021.

¹⁷³ Gauthreaux, S., and C. Belser, Effects of Artificial Night Lighting on Migrating Birds, in *Ecological Consequences of Artificial Night Lighting*, C. Rich and T. Longcore (eds.), 2006.

¹⁷⁴ Ogden, L.E., *Summary Report on the Bird Friendly Building Program: Effect of Light Reduction on Collision of Migratory Birds, Special Report for the Fatal Light Awareness Program*, January 2002, https://www.researchgate.net/publication/265106650_Summary_Report_on_the_Bird_Friendly_Building_Program_Effect_of_Light_Reduction_on_Collision_of_Migratory_Birds, accessed: October 24, 2021.

SPECIAL-STATUS SPECIES

Special-status species are plants and animals that are legally protected under the California Endangered Species Act and/or federal Endangered Species Act or other regulations, as well as other species that are considered rare enough by the scientific community and resource agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Special-status species also includes plants listed as listed on the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California database¹⁷⁵ that are presumed to be extinct in California (Rare Plant Rank 1A) and plants that are rare or endangered in California and elsewhere (Rare Plant Rank 1B). A list of all plant and wildlife species known to occur in the city is included in Appendix E of this EIR.

The species listed below have the potential to occur in the area of the proposed action and be affected by implementation; these species are considered in the impact analysis.

Peregrine Falcon – Peregrine falcon is designated as a state fully protected species under the California Fish and Game Code.¹⁷⁶ The falcon is a raptor that is known throughout California and is a year-round resident along the Pacific coast. The species have been documented nesting in San Francisco Financial District neighborhood and on the Bay Bridge walkway.^{177,178} Within an urban environment, peregrine falcons have adapted to nesting on the ledges of tall building, transmission towers, and bridge structures. Falcons forage mostly on other birds, and prey is captured while in flight.¹⁷⁹

Nesting Birds – The city and surrounding Bay Area provides habitat for numerous species of birds; some species are year-round residents and other species are migrants that pass through the area along spring and fall migration routes, such as the Pacific Flyway. Avian diversity in the city is highest in areas with relatively large, diverse patches of vegetation, such as Golden Gate Park, the Presidio, and other large open spaces. However, existing vegetation, ruderal land cover, and man-made structures within the city can provide habitat for resident nesting birds; patches of vegetation also provide potential habitat for migratory birds. Migratory birds that inhabit urban areas nest in a wide variety of locations¹⁸⁰ (e.g., street trees, ornamental shrubs, uninhabited buildings, ledges on houses and buildings, rooftops). Transmission towers and bridge structures, as well as other built structures can provide habitat for raptors, such as peregrine falcon. Native birds and raptors in the city (e.g., house finch, mourning dove, Brewer's blackbird, white-crowned sparrow, American crow, red-tailed hawk, etc.) are afforded protection under the federal Migratory Bird Treaty Act and California State Fish and Game Code section 3503. These regulations protect nesting birds against the destruction of active bird nests,

¹⁷⁵ California Native Plant Society, *Inventory of Rare and Endangered Plants of California*, <https://rareplants.cnps.org/>, accessed: October 27, 2021.

¹⁷⁶ A state fully protected species cannot be taken at any time, except, under certain circumstances, in association with a species recovery plan.

¹⁷⁷ California Department of Fish and Wildlife, *CNDDDB RareFind Records Search of County of San Francisco*, RareFind Version 5.2.14, 2021, <https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx#>, accessed: July 12, 2021.

¹⁷⁸ Predatory Bird Research Group, *About the PBRG*, <https://pbrg.pbsci.ucsc.edu/About.html#content4-1h>.

¹⁷⁹ California Department of Fish and Wildlife, *California Wildlife Habitat Relationships System, Peregrine Falcon*, 2021, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1687&inline=1>.

¹⁸⁰ S.J. Reynolds, J.D Ibáñez-Álamo, P. Sumasgutner, M.C. Mainwaring, Urbanization and Nest Building in Birds: A Review of Threats and Opportunities, in *Journal of Ornithology*, 160:841-860, <https://doi.org/10.1007/s10336-019-01657-8>, 2019.

and also against disruption of normal nesting behavior that results in nest abandonment and reproductive failure.

Special-Status Bats – Up to 15 species of bats can be found inside the city.¹⁸¹ Of the 15 species, two special-status bats, Townsend’s big-eared bat and western red bat, are known to occur within the built environment of the city and vegetated areas.¹⁸² Townsend’s big-eared bat and western red bat are California species of special concern.

Townsend’s Big-Eared Bat – Townsend’s big-eared bat roosts in natural and human-made structures (e.g., buildings); small clusters or groups (usually fewer than 100 individuals) of females and young form the maternity colony.¹⁸³ Townsend’s big-eared bat prefers habitats with a moderate amount of moisture and forage along habitat edges. The species is sensitive to disturbance of roosting sites. The California Natural Diversity Database (CNDDDB) lists Townsend’s big-eared bat in the area of Twin Peaks.

Western Red Bat – Western red bat has a widespread distribution throughout California. It roosts primarily in trees; it also roosts in shrubs but less often. Roosting habitat includes forests and woodlands. Roost sites often are in edge habitat adjacent to streams, fields, or urban areas. Nursery colonies share the same characteristics as cover roosting habitat. Preferred habitat includes edges or habitat mosaics that have trees for roosting and open areas for foraging. The CNDDDB documents the species in Golden Gate Park.

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to biological resources associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service

¹⁸¹ Krauel, J.J., and G, LeBuhn, *Patterns of Bat Distribution and Foraging Activity in a Highly Urbanized Temperate Environment*, PLoS ONE 11(12):e0168927, doi:10.1371/journal, 2016.

¹⁸² California Department of Fish and Wildlife, *CNDDDB RareFind Records Search of County of San Francisco*, RareFind Version 5.2.14, 2021, <https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx#>, accessed: July 12, 2021.

¹⁸³ California Department of Fish and Wildlife, *California Wildlife Habitat Relationships System, Townsend’s Big-Eared Bat*, 2000, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2347&inline=1>, accessed October 25, 2021.

- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan

The city is not within the boundaries of a natural community conservation plan (NCCP) but is within the boundaries of the Pacific Gas and Electric (PG&E) Bay Area Operation and Maintenance Habitat Conservation Plan; however, the plan is applicable only to PG&E actions. Therefore, the adopted habitat conservation plan, natural community conservation plan, or other approved conservation plan topic is not applicable to the proposed action and is not discussed further in this EIR.

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

The evaluation of impacts on biological resources is based on literature, database, and aerial photography review of biological conditions and potential biological resources in the city.

The following analysis is based on information review from the following data sources:

- Desktop analysis of CDFW's CNDDDB¹⁸⁴ species list
- Desktop analysis of the CNPS Inventory of Rare and Endangered Plants of California¹⁸⁵ species list
- Desktop analysis of USFWS Information for Planning and Consultation (IPaC)^{186, 187}
- Identification of waters and wetlands, using aerial photography, and existing water/wetland inventory data, such as the USFWS National Wetland Inventory¹⁸⁸
- Review of the USFWS Critical Habitat¹⁸⁹ mapper
- Review of the San Francisco Public Works Street Tree Map, San Francisco Tree Inventory¹⁹⁰
- Review of aerial imagery using Google Earth Pro¹⁹¹
- Review of SFRPD Significant Natural Resource Areas Management Plan¹⁹²

Queries of the above data sources resulted in a list of all plant and animal species known to occur in the city (Appendix E of this EIR). The list was reviewed to determine which plants and animals are legally protected under the state and/or federal Endangered Species Acts, or other regulations, as well as species that are considered rare enough by the scientific community and resource agencies to warrant special consideration, particularly with regard to the protection of isolated populations, nesting or denning locations, communal roosts, or other essential habitat (e.g., breeding and foraging habitat). In this analysis, these species are referred to as “special-status species.”

¹⁸⁴ California Department of Fish and Wildlife, *CNDDDB RareFind Records Search of County of San Francisco*, RareFind Version 5.2.14, 2021, <https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx#>, accessed: July 12, 2021.

¹⁸⁵ California Native Plant Society, *Inventory of Rare and Endangered Plants of California* (online edition, v9-01 0.0), 2021, <https://rareplants.cnps.org/Search/Simple>, accessed: July 12, 2021.

¹⁸⁶ U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, Information for Planning and Consultation (IPaC), *List of Endangered and Threatened Species that May Occur in the Proposed Project Location and /or May Be Affected by the Proposed Project*, 2021, <https://ecos.fws.gov/ipac/>, accessed: July 12, 2021.

¹⁸⁷ U.S. Fish and Wildlife Service, San Francisco Bay-Delta Fish and Wildlife, Information for Planning and Consultation (IPaC), *List of Endangered and Threatened Species that May Occur in the Proposed Project Location and /or May Be Affected by the Proposed Project*, 2021, <https://ecos.fws.gov/ipac/>, accessed: July 12, 2021.

¹⁸⁸ U.S. Fish and Wildlife Service, National Wetlands Inventory, *Wetland Mapper, Surface Waters and Wetlands*, <https://www.fws.gov/wetlands/data/Mapper.html>, accessed: July 12, 2021.

¹⁸⁹ U.S. Fish and Wildlife Service, *Critical Habitat Mapper – Critical Habitat for Threatened and Endangered Species*, <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>, accessed: July 19, 2021.

¹⁹⁰ San Francisco Public Works, *Street Tree Map, San Francisco Tree Inventory*, 2021, <https://storymaps.arcgis.com/stories/45c3573f1b58418cb13bed3f0cdaef0c>, accessed: July 12, 2021.

¹⁹¹ Google Earth Pro, version 7.3.3.7786 (64 bit), imagery date February 24, 2021, latitude 37.768432°, longitude -122.425354, elevation 120 feet.

¹⁹² San Francisco Recreation and Park Department, *Significant Natural Resource Areas Management Plan*, 2006, <https://sfrecpark.org/1402/Natural-Resource-Management-Plan>, accessed: December 16, 2021.

A plant species was considered to be of special status if it met one or more of the following criteria:

- Listed, proposed for listing, or candidate for listing, as threatened or endangered under the federal Endangered Species Act (CFR 17.11 for wildlife; 50 CFR 17.12 for plants; 67 Federal Register 40658 for candidates) and various notices in the Federal Register for proposed species)
- Listed under the California Endangered Species Act as threatened or endangered, or proposed or candidates for listing
- Designated as rare under the Native Plant Protection Act
- Plants listed by the CNPS in the online version of its Inventory of Rare and Endangered Plants of California (CNPS 2013) as List 1a, 1B, and 2
- Species that otherwise meet the definition of rare, threatened, or endangered species under CEQA

Special-status wildlife included species that met one or more of the following criteria:

- Listed, proposed for listing, or candidate for listing as threatened or endangered under the federal Endangered Species Act
- Listed or candidates for listing as threatened or endangered under the California Endangered Species Act
- Designated as Species of Special Concern¹⁹³ (fish and wildlife species that do not have state or federal threatened or endangered status but may still be threatened with extinction) or a Fully Protected Species by CDFW
- Species that otherwise meet the definition of rare, threatened or endangered species under CEQA

Natural communities were considered special status if they are identified on the CDFW List of Vegetation Alliances and Associations as being highly imperiled, also classified by CDFW as ranks S1 to S3 in the CNDDDB (CDFW 2014) and natural communities of special concern.

The list of special-status species was evaluated by reviewing the range and habitat requirements of the species and comparing those to the conditions in the city. Aerial imagery interpretation was used to determine whether suitable habitat is present within the area of the proposed action. No field surveys or delineation of aquatic resources were conducted for the evaluation of biological resources. Species from the list were considered in the analysis if they were known to occur in region, the species' range was within the area of the proposed action, or suitable habitat for the species is present in the area of the proposed action. Species with potential to occur in the city and that met one or more of the above criteria were considered in the biological resource analysis.

¹⁹³ See <https://wildlife.ca.gov/Conservation/SSC> for a full definition of Species of Special Concern.

Impacts and Mitigation Measures

Impact BIO-1: The proposed action would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (*Less than Significant*)

Based on database review, as listed in “Methodology,” above, a list of all plant and wildlife species known to occur in the city has been compiled (Appendix E of this EIR). Habitat for the majority of special-status plant and animal species is generally restricted to the undeveloped vegetated areas and open spaces that are scattered throughout the central and southern portions of the city (Figure 4.1-19, p. 4.1-130). Based on a review of the database searches, special-status species with potential to occur within the geographic area of the proposed action would be American peregrine falcon (state fully protected), migratory nesting birds (protected under state and federal laws), and Townsend’s big-eared bat and western red bat (both a state species of special concern).

Effects on birds related interference with the movement are addressed under Impact BIO-4, below.

Peregrine Falcon

The proposed action would not result in any direct physical changes to the environment; therefore, it would not result in direct impacts on nesting peregrine falcon. In general, the proposed housing element update seeks to increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and in low-density areas, primarily on the west and north sides of the city. This change would not affect peregrine falcons. The species is not known to nest on the west side because suitable tall nest structures (e.g., skyscrapers with ledges) are absent; therefore, peregrine falcon nesting habitat would not be affected by the proposed action. The proposed action consists of more residential development compared with the 2050 environmental baseline. Increased density in certain areas of the city would not affect nesting peregrine falcon because falcons nesting in the city are acclimated to an already highly disturbed environment and heavy human disturbance; peregrine falcons would be able to continue to forage and nest on human-made structures. Therefore, the proposed action would result in *less-than-significant* impacts on peregrine falcon, and no mitigation is required.

Nesting Birds

The proposed action would not result in any direct physical changes to the environment; therefore, it would not result in direct impacts on nesting birds. Although birds that nest in an urban environment are generally habituated to regular human presence and have a higher tolerance for humane disturbance, the potential exists for birds to nest in the area where additional housing development would occur because of the proposed action. Activities that result in *take*¹⁹⁴ of migratory nesting birds are prohibited by federal and state regulations. Unless expressly authorized under California Fish and Game Code chapter 1.5, article 3, section 2081, take of fully

¹⁹⁴ The California Fish and Game Code defines *take* as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” (California Fish and Game Code section 86). The U.S. Fish and Wildlife Service defines *take* as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct” (federal Endangered Species Act section 3(19)).

protected species is not allowed. Migratory nesting birds are protected under the Migratory Bird Treaty Act (16 United States Code [USC] 703–712) and California Fish and Game Code (sections 3503, 3511, and 3513). Unless the Fish and Game Code or its implementing regulations provide otherwise, under California law it is unlawful to take a bird, mammal, fish, reptile, or amphibian (California Fish and Game Code section 2000).

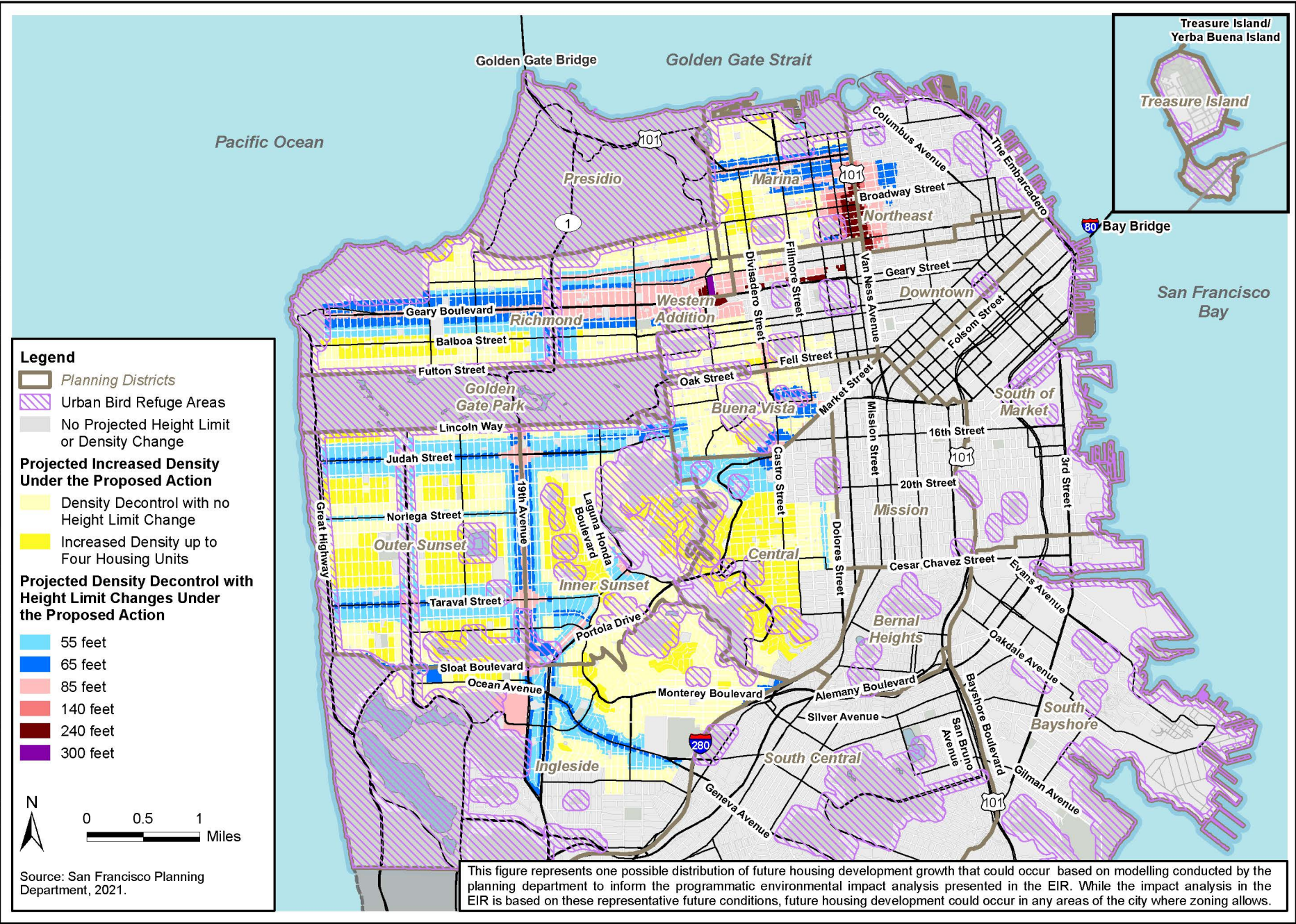
Anticipated future development consistent with the housing element update would be required to comply with the federal Migratory Bird Treaty Act and California Fish and Game Code section 3500 et al., including sections 3503, 3503.5, 3511, and 3513, which state that it is unlawful to take or possess any migratory nongame bird or needlessly destroy nests of birds, except as otherwise outlined in the code. Compliance with existing state and federal regulations would ensure that future development consistent with the housing element update would have *less-than-significant* impacts on migratory nesting birds, and no mitigation is required.

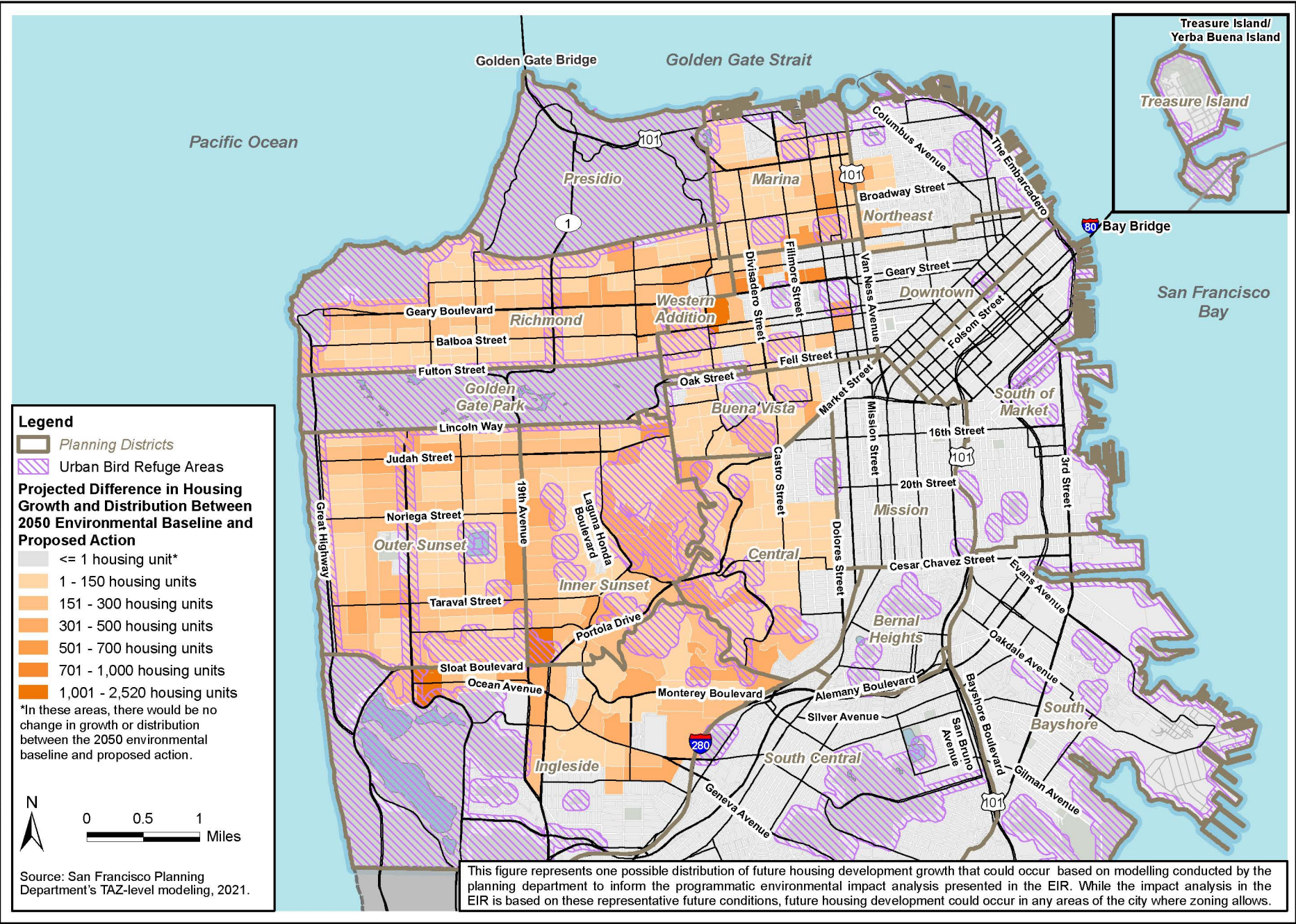
The department has identified location-related hazards within the city that present heightened risk to urban nesting birds. These “location-related” hazards are “buildings located inside of, or within a clear flight path of less than 300 feet from an urban bird refuge.”¹⁹⁵ Future development that overlaps, or is less than 300 feet from an urban bird refuge, could pose an increased risk for direct and indirect effects on migratory nesting birds (Figures 4.1-21 and 4.1-22, pp. 4.1-141 and 4.1-142). Future development resulting in height increases and the department’s Bird-Safe Building Standards are discussed below under Impact BIO-4.

Townsend’s Big-Eared Bat and Western Red Bat

Future actions implementing the proposed action, such as shifting a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas (primarily located on the west and north sides of the city) could result in impacts on special-status bats. Suitable habitat is generally limited to abandoned human-made structures such as buildings, bridges, and water diversion tunnels for Townsend’s big-eared bat, and woodland edges for western red bat. However, because Townsend’s big-eared bat is uncommon and highly sensitive to disturbance, the potential for the species to occur in urban development surrounded by regular human disturbance is very low. Remnant woodlands and riparian areas are found in public open spaces on the west side of the city (e.g., the Presidio, Pine Lake Park, Lake Merced). These areas have the potential to provide suitable habitat for western red bat. However, the proposed action would not result in future development in these open spaces; therefore, there would be no direct effect on western red bat. In addition, narrow rows of street trees or small patches of trees in residential yards and small parks would most likely not provide suitable roosting habitat for western red bat because of the species’ preference for dense foliage and riparian habitat. Thus, the potential for Townsend’s big-eared bat and western red bat to occur in the area of the proposed action is low because of the limited and fragmented existing habitat and general rarity and patchy distributions of these species. Furthermore, the anticipated future development consistent with the housing element update would be required to comply with state and federal laws protecting nongame mammals. Nongame mammals occurring naturally in California are protected under California Fish and Game Code section 4150. In addition, several federal land management agencies (e.g., National Park Service) and city

¹⁹⁵ San Francisco Planning Department, *Urban Bird Refuge*, published July 2014, <https://sfplanning.org/resource/urban-bird-refuge>.





departments (e.g., SFRPD) have special management designations and regulations for the protection of special-status bats. Potential impacts related to special-status bats would be reduced by compliance with the Open Space Element of the San Francisco General Plan, Chapter 8 of the San Francisco Environment Code. The department assumes compliance with these existing regulations; therefore, future development that would implement the housing element update would have *less-than-significant* impacts on special-status bats, and no mitigation measures are necessary.

Impact BIO-2: The proposed action would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (*Less than Significant*)

Future development consistent with the housing element update would be located on developed or urban in-fill sites that do not provide the riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations or by CDFW or USFWS. As shown in **Figure 4.1-19**, p. 4.1-130, USFWS-designated critical habitat occurs in a limited number of small, isolated areas in San Francisco, including Corona Heights Park, Twin Peaks, Glen Canyon Park, and the east side of Mt. Davidson Park, all of which are public lands that are not subject to future housing development. Remnant riparian habitat occurs at various lakes within Golden Gate Park, the North Fork of Islais Creek in Glen Canyon Park, Pine Lake in Pine Lake Park, Yosemite Creek in McLaren Park, the Presidio, and Lake Merced.¹⁹⁶ Willow riparian woodland is located along Lobos Creek, on the north side of Mountain Lake, and in the El Polin Spring/Tennessee Hollow area).¹⁹⁷ Oak riparian woodland is also present at Lobos Creek. Riparian scrub habitat is found at Mountain Lake and Tennessee Hollow. Other waterways in the city that may support remnant riparian habitat include Mission Creek and Lake Merced. Managed freshwater ponds and lakes occur at Lake Merced and Mountain Lake, and estuarine and marine wetland habitats occur along the shoreline of the city.¹⁹⁸ Remnant oak woodland, grassland, coastal scrub communities, as well as saltwater wetlands, are scattered throughout various natural areas, such as Yerba Buena Island, McLaren Ridge, and Yosemite Slough. Areas with riparian habitat and sensitive natural communities are located on public lands that are not subject to future housing development under the proposed action.

Future development consistent with the housing element update would not be located on sites close to (i.e., within 100 feet) riparian habitats, sensitive natural communities, or designated critical habitat areas. Therefore, the housing element update would not result in substantial adverse effects on riparian habitat or other sensitive natural communities. Potential impacts on riparian natural communities are regulated by CDFW under section 1600 of the California Fish and Game Code. Prior to any ground-disturbing activities or issuance of any grading or building permits, the project sponsors of actions implementing the housing element update would be required to obtain all necessary permits pertaining to affected riparian habitat regulated by CDFW, as necessary. In addition, potential impacts on riparian habitat and sensitive natural communities would be minimized with implementation of environmental protection element policy 1.1, Conserve and Protect Natural Resources of

¹⁹⁶ SF Environment, *Ecosystems*, <https://sfenvironment.org/ecosystems/overview/ecosystems>, accessed: October 25, 2021.

¹⁹⁷ Ibid.

¹⁹⁸ U.S. Fish and Wildlife Service, National Wetlands Inventory, *Wetland Mapper, Surface Waters and Wetlands*, <https://www.fws.gov/wetlands/data/Mapper.html>, accessed: July 18, 2021.

San Francisco, as well as recreation and open space element policy 1.3, policy 2.1, policy 2.4, policy 2.8, and policy 4.1 in the general plan.

With implementation of these policies and adherence to federal, state, and local regulations, as discussed above and in Impact BIO-1, impacts of future development consistent with the housing element update on riparian habitat or sensitive natural communities would be *less than significant*, and no mitigation measures are necessary.

Impact BIO-3: The proposed action would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (*Less than Significant*)

USFWS National Wetland Inventory mapper¹⁹⁹ and U.S. Geological Survey National Hydrography Dataset²⁰⁰ were reviewed to determine the location of state and federally protected wetlands within the city (see **Figure 4.1-20**, p. 4.1-141). Wetlands and streams that occur within the city include Lobos Creek; areas within Buena Vista Park, Glen Canyon, Woodland Creek in the Interior Greenbelt, and Pine Lake Park/Stern Grove Park; Twin Peaks Reservoir, Laguna Honda Reservoir, and the pond surrounding the Palace of Fine Arts, all of which are constructed features; as well as other features not shown on the wetland maps. Mapped wetlands and streams within the city, as shown in **Figure 4.1-20**, are located on public lands within parks or open spaces managed by SFRPD, SFPUC, or the National Parks Service. These wetlands and streams are highly modified and fragmented because of urbanization. The habitat value of these remnant wetland varies and is highly related to the level of human use.

Future development consistent with the housing element update would occur in a generally built out setting and would not occur on sites close to (i.e., within 100 feet) state or federally protected wetlands or alter the course of a stream. The proposed action would not result in any direct physical changes to the environment; therefore, the proposed action would not result in direct impacts on state or federally protected wetlands.

Future development consistent with the housing element update could result in indirect impacts on surface water bodies through erosion or runoff. However, as discussed under Impact HY-1 in “Hydrology and Water Quality” below, most stormwater runoff in the city is collected and treated by the city’s combined sewer system prior to being discharged into the bay and ocean. As described in Impact HY-3 below, all future development consistent with the housing element update would be located in areas that are served by the city’s combined sewer system. As a result, the construction and operation of future development consistent with the proposed action would not result in impacts on surface water quality.

All future development consistent with the housing element update would be subject to existing regulatory requirements, such as the city’s Stormwater Management Requirements and Design Guidelines and the Construction Site Runoff Ordinance (San Francisco Public Works Code, article 4.2) (see “Hydrology and Water

¹⁹⁹ U.S. Fish and Wildlife Service, *National Wetlands Inventory, Wetland Mapper, Surface Waters and Wetlands*, <https://www.fws.gov/wetlands/data/Mapper.html>, accessed: July 12, 2021.

²⁰⁰ U.S. Geological Survey, *National Hydrography Dataset*, <https://www.usgs.gov/national-hydrography/access-national-hydrography-products>, accessed: July 12, 2021.

Quality,” below). Compliance with these local regulations would ensure that the proposed action would not have significant impacts on state or federal wetlands. Furthermore, future development consistent with the housing element update would be subject to general plan policies that require the protection of natural habitat (e.g., open space element policies 1.3 and 4.1 and environmental protection element policy 1.1) and limit potential sources of water pollution through the general plan.

Future development within the city consistent with the housing element update would be subject to general plan conservation goals to preserve wetlands, consistent with state and federal requirements. All surface runoff from future housing development sites would be collected and treated by the city’s combined sewer system in accordance with regulatory standards prior to discharge to the bay or ocean and would therefore have no effect on wetlands or streams. Therefore, compliance with the policies and regulations would ensure that impacts from future actions consistent with the housing element update would be *less than significant* with respect to the effects on protected wetlands. No mitigation measures are necessary.

Impact BIO-4: The proposed action would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (*Less than Significant*)

Habitat loss, fragmentation, and degradation resulting from land use changes or habitat conversion can alter the use and viability of wildlife movement corridors (i.e., linear habitats that naturally connect and provide passage between two or more habitats or habitat fragments). The suitability of a habitat as a wildlife movement corridor is related to, among other factors, the habitat corridor’s dimensions (length and width), topography, vegetation, and exposure to human influence as well as the species in question.

Movement corridors for wildlife through the city are severely limited. Based on review of CDFW’s California Essential Habitat Connectivity project,²⁰¹ the city is not located within a known movement corridor or fish passage priority and no essential connectivity areas have been identified in the city. Wildlife movement through the city is limited primarily to remnant riparian corridors and open spaces. Because future development consistent with the housing element update would not be located in any open spaces where remnant riparian habitats are found, the proposed action would not affect the movement of any native resident or migratory fish or wildlife species. Common urban-adapted wildlife species that currently move through the city would continue to be able to do so under the proposed action.

²⁰¹ California Department of Fish and Wildlife, *BIOS Habitat Connectivity Viewer 5.96.99, Terrestrial Connectivity – Areas of Conservation Emphasis*, dataset 2734, 2021, <https://apps.wildlife.ca.gov/bios/?bookmark=648>, accessed: July 20, 2021.

Bird Safe Buildings

Collisions with buildings and windows are the leading cause of death for birds in North America.^{202,203,204} It is estimated that, in North America alone, between 100 million and 1 billion birds are killed because of collisions with buildings and other structures each year.^{205,206} Although many collision hazards are present in an urban environment (e.g., vehicles, bridges, power lines, transmission towers, turbines), the majority of avian collisions are with buildings. Bird strikes may pose greater risks for special-status species, such as rare, threatened, or endangered species, whose populations are already in decline because of habitat loss, climate change, and other pressures; threatened and endangered species have also been killed because of building collisions.^{207,208} Collisions occur when birds fail to recognize window glass as a barrier.

Generally, as building size increases, the glass surface area also increases, making larger buildings more of a threat for birds. The ground floor and first few stories of buildings, regardless of overall height, present the greatest hazards to most birds because reflections from ground-level features, such as vegetation and landscape features, attract birds toward glass surfaces and often result in collisions. A building's location in relation to adjacent landscape features can also be critical in determining the risk to birds. Buildings with large windows adjacent to vegetated areas as well as open spaces and bodies of water present higher risks for birds.²⁰⁹

Future development consistent with the housing element update could occur near large expanses of open space (e.g., Golden Gate Park, the Presidio) or water (e.g., Lake Merced) that provide a potentially attractive stop-over for migratory birds. Future development consistent with the housing element update would result in an increase in building density and height, as well as shift anticipated growth from the east side of the city to the west and north sides of the city, which are areas where more urban bird refuges are located. Therefore, future development consistent with the housing element update could increase the risk of avian collisions with buildings.

The city has adopted guidelines to address this issue and has regulations for bird-safe designs within the city. Planning code section 139, Standards for Bird-Safe Buildings, establishes building design standards to reduce

²⁰² Hager, S.B., H. Trudell, K.J. McKay, S.M. Crandall, L. Mayer, Bird Density and Mortality at Windows, in *The Wilson Journal of Ornithology* 120(3):550-564, 2008.

²⁰³ Klem, D., Jr., Avian Mortality at Windows: The Second-Largest Human Source of Bird Mortality on Earth, in *Proceedings of the Fourth International Partners in Flight Conference: Tundra to Tropics*, 244–251, 2009.

²⁰⁴ Gelb, Y., and N. Delacretaz, Windows and Vegetation: Primary Factors in Manhattan Bird Collisions, in *Northeastern Naturalist* 16(3):455–470, 2009.

²⁰⁵ U.S. Fish and Wildlife Service, *Migratory Bird Mortality: Many Human-Caused Threats Afflict Our Bird Populations*, January 2002.

²⁰⁶ Klem, D., Jr., Avian Mortality at Windows: The Second-Largest Human Source of Bird Mortality on Earth, in *Proceedings of the Fourth International Partners in Flight Conference: Tundra to Tropics*, 244–251, 2009.

²⁰⁷ Ogden, L.J., *Collision Course: The Hazards of Lighted Structures and Windows to Migrating Birds. A Special Report for the World Wildlife Fund Canada and the Fatal Light Awareness Program*, September 1996, <https://tethys.pnnl.gov/sites/default/files/publications/Ogden1996.pdf>, accessed: October 24, 2021.

²⁰⁸ Furuya, A., We Finally Know How Bright Lights Affect Birds Flying at Night, in *Audubon News*, October 3, 2017, <https://www.audubon.org/news/we-finally-know-how-bright-lights-affect-birds-flying-night>, accessed: October 24, 2021.

²⁰⁹ San Francisco Planning Department, *Standards for Bird-Safe Buildings*, 2011, <https://sfplanning.org/standards-bird-safe-buildings#info>, accessed: October 24, 2021.

avian mortality rates associated with bird strikes.²¹⁰ The building standards are based on two types of hazards: (1) location-related hazards where the siting of a structure inside or within 300 feet of an Urban Bird Refuge (open spaces that are 2 acres and larger and dominated by vegetation or open water) creates an increased risk to birds, and (2) feature-related hazards, which may increase risks to birds regardless of where the structure is located. For new building construction where the location-related standard would apply, the façade requirements include no more than 10 percent untreated glazing and minimal lighting. Any lighting that is used must be shielded and prevented from resulting in any uplighting. Feature-related hazards include free-standing glass walls, wind barriers, skywalks, balconies, and greenhouses on rooftops that have unbroken glazed segments 24 square feet or larger in size. Any structure that contains these elements must treat 100 percent of the glazing.

The majority of urban bird refuges^{211,212} are in the center of the city and on the west side of the city (see **Figures 4.1-21** and **4.1-22**, pp. 4.1-141 and 4.1-142). The anticipated location of future development consistent with the housing element update could overlap with areas identified as urban bird refuge areas; these areas include Park Presidio Boulevard, Sunset Boulevard, the western portion of Geary Boulevard, eastern portion of Lincoln Way, portions of Sloat Boulevard, streets surrounding Kite Hill, Twin Peaks Boulevard, and streets around Lafayette Park and Gough Street.

Compliance with planning code section 139 and the adopted Standards for Bird-Safe Buildings would ensure that impacts related to bird hazards would be *less than significant*, and no mitigation measures are necessary.

Future development consistent with the housing element update would generate additional lighting, particularly in the north and west sides of the city. However, San Francisco is an urban setting where light sources such as street lights, parking lot lights, and building lights are common and existing lighting sources already provide substantial sources of illumination throughout the city. A discussion of anticipated light and glare and nighttime sky brightness in the city is included in “Aesthetics” in this section. Overall, future development consistent with the housing element update is not expected to significantly increase the amount of light generated to interfere with migratory wildlife species. In addition, most nocturnal migratory birds fly at heights greater than the anticipated height increases assumed under the housing element update (see **Figure 4.1-21**, p. 4.1-141). Nighttime lighting from future development consistent with the housing element update is not expected to substantially increase the risk of avian collision. New buildings or new additions to existing buildings would be required to comply with the adopted Standards for Bird-Safe Buildings, which would minimize lighting hazards for bird with the use of lighting treatments. Future development consistent with the housing element update would be subject to the standards.

²¹⁰ San Francisco Planning Department, Standards for Bird-Safe Buildings, July 14, 2011, https://sfplanning.org/sites/default/files/documents/reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%202011-30-11.pdf, accessed November 11, 2020.

²¹¹ San Francisco Planning Department, *Urban Bird Refuge*, 2014, <https://sfplanning.org/sites/default/files/resources/2018-08/Urban%20Bird%20Refuge.pdf>, accessed: July 20, 2021.

²¹² San Francisco Planning Department, *Standards for Bird-Safe Buildings*, 2011, https://sfplanning.org/sites/default/files/documents/reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%202011-30-11.pdf, accessed: July 20, 2021.

The proposed action would not interfere substantially with the movement of native resident or migratory species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The impact would be *less-than-significant*, and no mitigation measures are necessary.

Impact BIO-5: The proposed action would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant*)

Local policies and ordinances for protecting biological resources include San Francisco Public Works Code article 16 sections 8.02–8.11, which regulate the removal of protected trees in San Francisco. Sections 8.02–8.11 of the code define and require disclosure and the protection of significant, landmark, and street trees on public and private property.²¹³

Removal of a landmark, significant, or street tree requires a public works tree removal permit, and the department requires a tree planting and protection checklist to be included in all permit applications for projects that could affect a protected tree. If tree relocation is impracticable, tree replacement is required, consistent with the planning code. Tree removal would require relocation or replacement, which would avoid a net loss of trees and maintain urban forest resources in the city. By applying for tree removal permits and replacing trees in accordance with established regulations and plans, future development consistent with the housing element update would not conflict with the city’s local tree ordinance.

Because future development consistent with the housing element update would comply with public works permit requirements and the planning code, the impact would be *less than significant*, and no mitigation measures are necessary.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update’s environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco’s Waterfront Plan Update, Bay Area Rapid Transit’s Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

²¹³ Landmark trees are present in the city and are designated by the board of supervisors for their environmental, cultural, historical, botanical, or other value. Significant trees are defined as trees that are more than 20 feet tall with a 15-foot-wide canopy or a 12-inch trunk diameter at 4.5 feet above grade on private land within 10 feet of the public right-of-way or under the jurisdiction of public works. A street tree is any tree within the public right-of-way (San Francisco Public Works Code article 16, sections 8.02–8.11).

Impact C-BIO-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on biological resources. (*Less than Significant*)

The city is an urban area with few natural communities, wetlands, riparian areas, or other sensitive habitats remaining. Past development has resulted in the loss and degradation of natural communities, wetlands, and riparian or other sensitive habitats. Those that remain are fragmented and located on public lands that are not subject to future housing development or future development under the cumulative projects; therefore, no cumulative impact would occur to natural communities, wetlands, riparian areas, or other sensitive habitats.

Of the cumulative projects, only future development consistent with the Waterfront Plan Update could result in construction or reuse of buildings and the increase in building glazing, which could injure or kill migratory birds in the event of a collision or could result in the removal of existing vegetation (e.g., street trees) that provide nesting and foraging resources for birds and other wildlife species that occur in the city. Additionally, similar to future development consistent with the proposed action, future development consistent with the Waterfront Plan Update would be required to adhere to biological resource protection laws and regulations, including the state and federal Endangered Species Act, Migratory Bird Treaty Act, and the California Fish and Game Code as well as environmental protection policies and provisions in the general plan and other applicable biological resource protection plans (e.g., bird-safe building and urban forestry ordinances). With compliance with applicable regulations, plans, and ordinances, the impacts of the proposed action in combination with future development consistent with the Waterfront Plan, would be *less than significant*, and no mitigation measures are required.

Geology and Soils

The proposed action would have the potential to result in significant paleontological resources impacts. Accordingly, this topic is further analyzed and included in Section 4.10, Paleontological Resources.

ENVIRONMENTAL SETTING²¹⁴

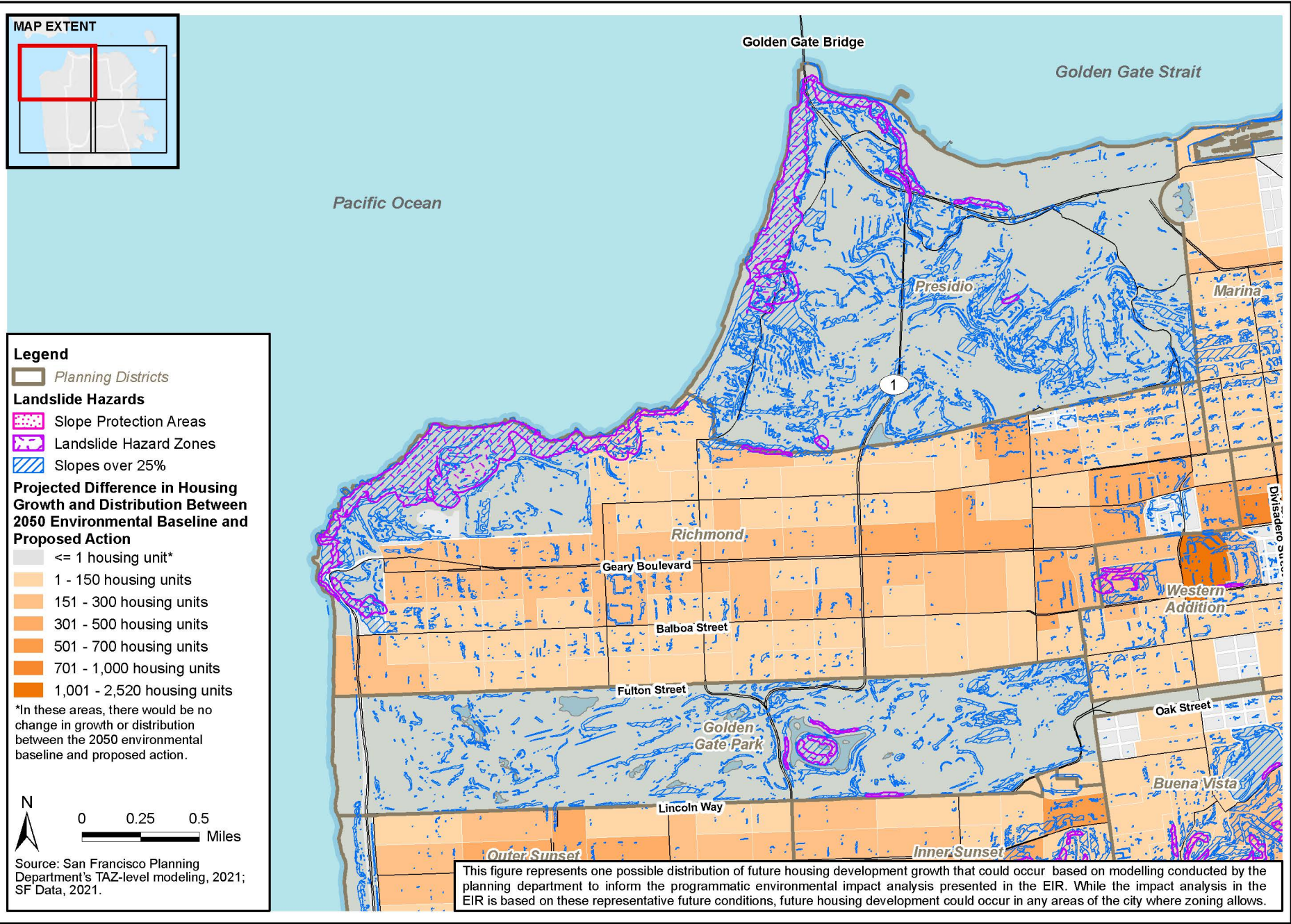
The city covers approximately 49 square miles and has a varied topography. Portions of the city are rolling or hilly; elevations range from sea level to 938 feet at Mount Davidson. Approximately 3 percent of the land in the city is in an earthquake-induced landslide hazard zone.²¹⁵ As shown in **Figures 4.1-23a** through **4.1-23d**, pp. 4.1-150 through 4.1-153, the city also contains Landslide Hazard Zones, Slope Protection Areas, and slopes greater than 25 percent, which may present risks related to landslide impacts. The city is underlain by a variety of soil types. Artificial fill, dune sand, and the Colma Formation are generally non-expansive soils. Moderate to highly expansive soils have been encountered in the Presidio, in the northwestern portion of the city,²¹⁶ and in Bayview Hunters Point, in the southeastern portion of the city.²¹⁷

²¹⁴ For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

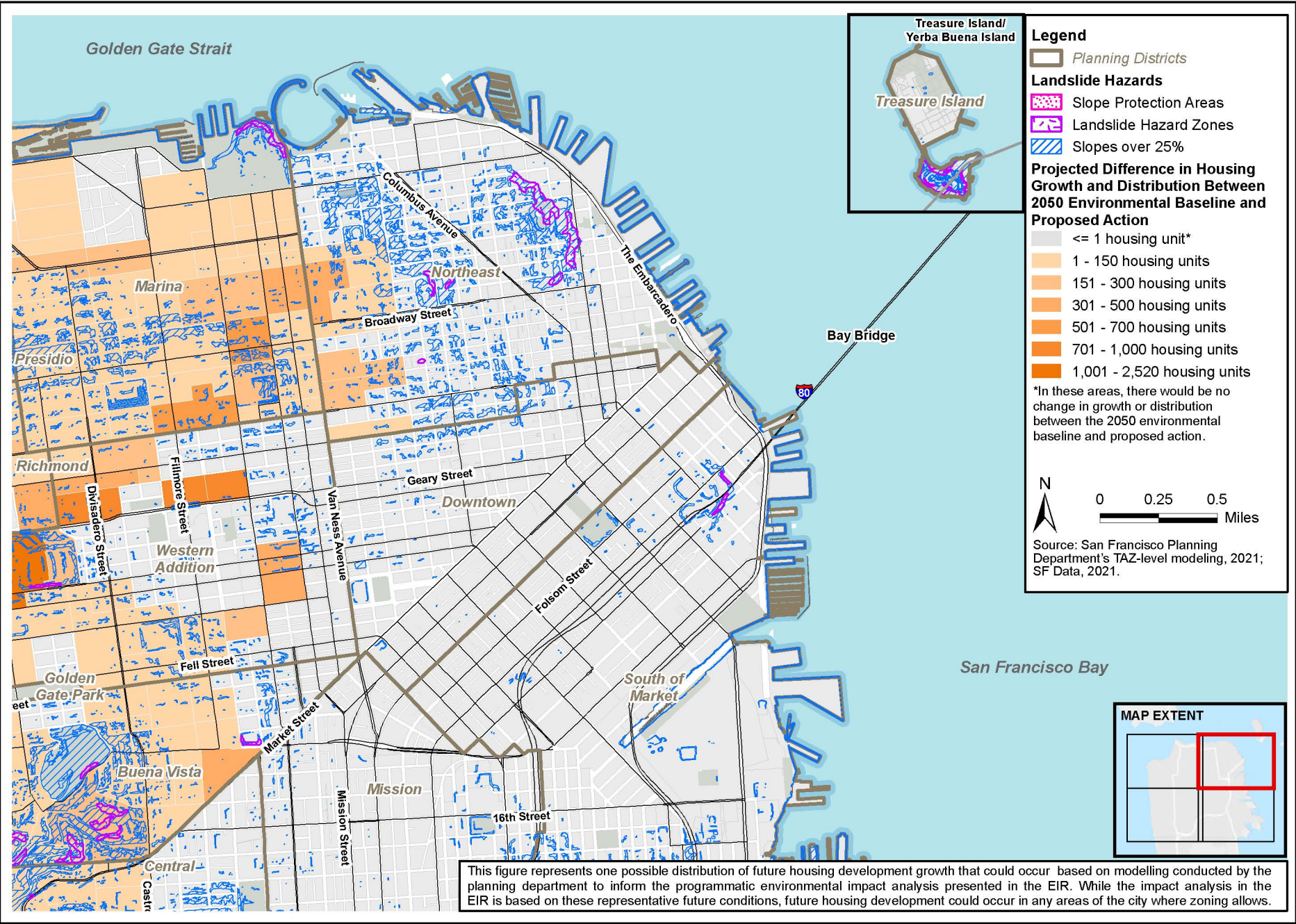
²¹⁵ City of San Francisco, *San Francisco General Plan*, Community Safety Element, 2012. Available: <https://generalplan.sfplanning.org/>, accessed: July 13, 2021.

²¹⁶ AECOM, *Final Environmental Impact Statement San Francisco Veterans Affairs Medical Center Long-Range Development Plan*, 2015, https://www.sanfrancisco.va.gov/ArchivedDocs/3_6_Geology_Soils.pdf accessed: July 14, 2021.

²¹⁷ San Francisco Planning Department, *770 Woolsey Street Project Draft Environmental Impact Report*, 2017, <https://sfplanning.org/environmental-review-documents>, accessed: July 14, 2021.

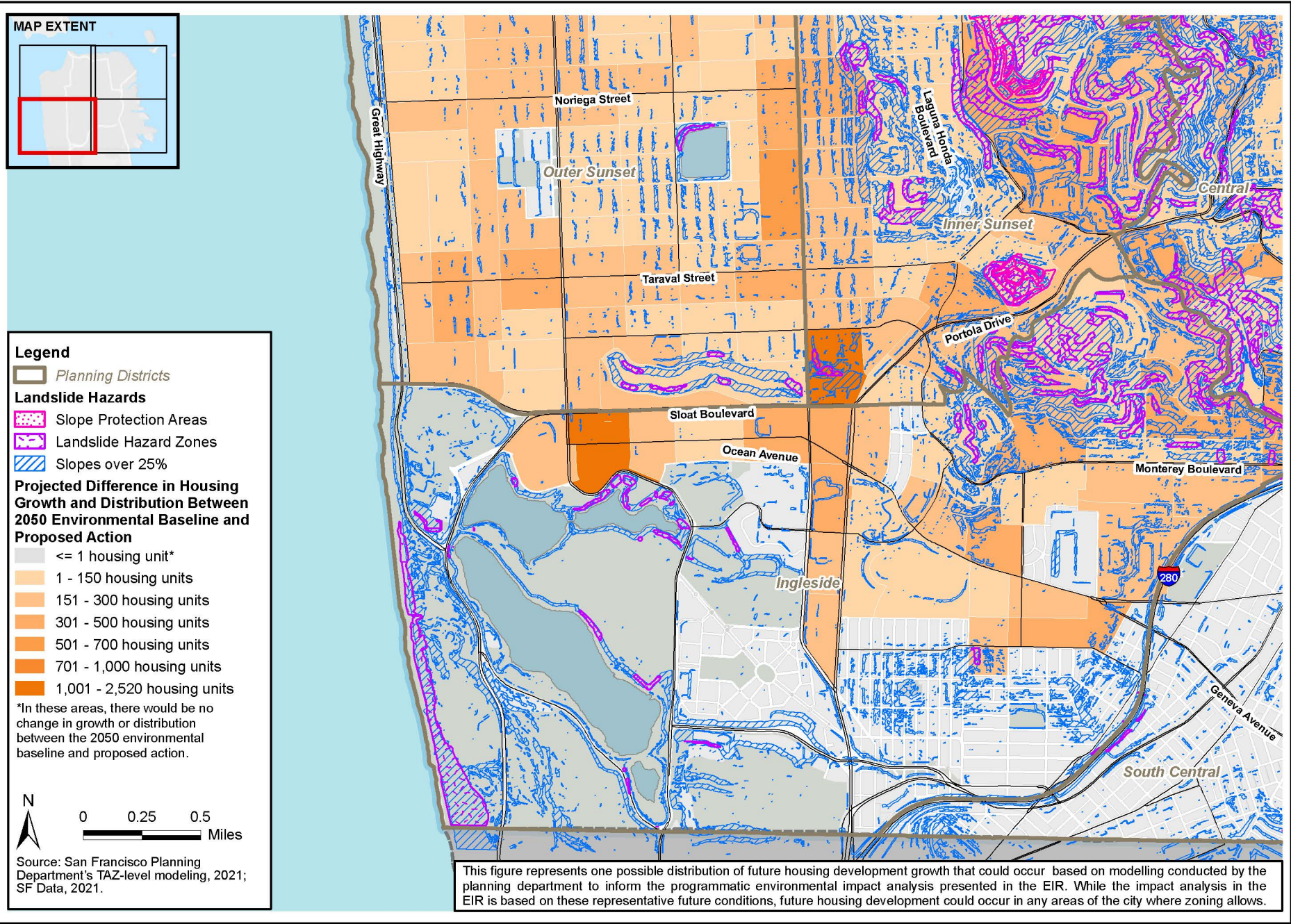


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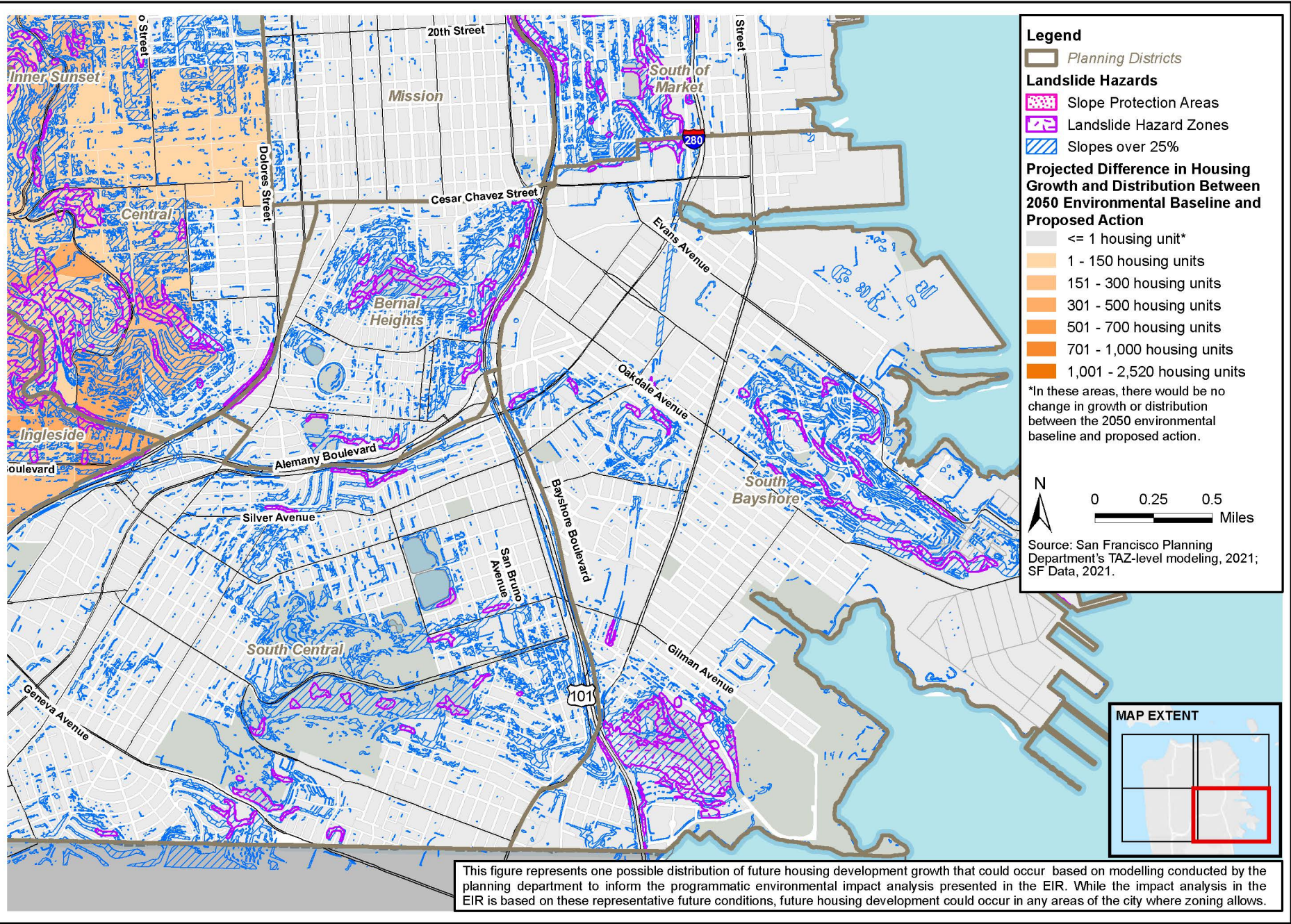


This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.

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As shown in **Figures 4.1-24a** through **4.1-24d**, pp. 4.1-155 through 4.1-158, surficial sediments (Holocene to Pleistocene) throughout the city vary, with the northwestern and northeastern portions containing areas with beach deposits (Pleistocene), the Colma Foundation (Pleistocene), and the Franciscan Complex and associated rocks (Cretaceous and Jurassic). The southeastern portion is underlain by a high concentration of the Franciscan Complex and associated rocks, and the southwestern portion is underlain by a high concentration of Colma Formation. Bedrock beneath San Francisco consists of the Franciscan Complex, comprising sedimentary and volcanic rocks of Jurassic and Cretaceous age (approximately 65 to 213 million years old).

Expansive soils are characterized by their ability to undergo substantial volume changes (i.e., shrink and swell) due to variations in moisture content. Expansive soils are typically very fine grained and have a high to very high percentage of clay. They can damage structures and buried utilities and increase maintenance requirements. The presence of expansive soils is typically associated with high clay content.

As shown in **Figure 4.1-25**, p. 4.1-159, although no active fault zones traverse the city,²¹⁸ the city is within a complex network of active faults that extend throughout the Bay Area. The major active earthquake faults in the area are the North San Andreas, San Gregorio, Hayward, and Calaveras faults. Of these, the North San Andreas, Hayward, and Calaveras faults all have a 25 percent or greater likelihood of experiencing a magnitude 6.7 or greater earthquake between 2014 and 2043. Overall, the likelihood of an earthquake of magnitude 6.7 or greater occurring in the San Francisco Bay Area over the same period is 72 percent.²¹⁹

Major earthquakes occurring on the aforementioned faults have resulted in substantial damage within the city.²²⁰ The historical record of damaging earthquakes in San Francisco dates back to 1808. Many scientists believe that the frequency of earthquakes since 1979 may indicate a return to higher rates of seismic activity.²²¹ Seismic ground shaking could lead to the densification of soils (i.e., loose sand and gravel layers) within portions of the city, potentially causing soil settlement, including differential settlement in which uneven settlement within underlying soils can damage building foundations.

Liquefaction occurs when saturated soils lose cohesion, strength, and stiffness with applied shaking, such as that from an earthquake. The lack of cohesion causes solid soil to behave like a liquid, resulting in ground failure. When a load such as a structure is placed on ground that is subject to liquefaction, ground failure can result in the structure sinking and soil being displaced. Ground failure can take on many forms, including flow failures, lateral spreading, lowering of the ground surface, ground settlement, loss of bearing strength, ground fissures, and sand boils. Liquefaction within subsurface layers, which can occur during ground shaking associated with an earthquake, can also result in ground settlement. As shown in **Figure 4.1-26**, p. 4.1-160, although the eastern portion of the city along San Francisco Bay contains the areas that are most susceptible to liquefaction,

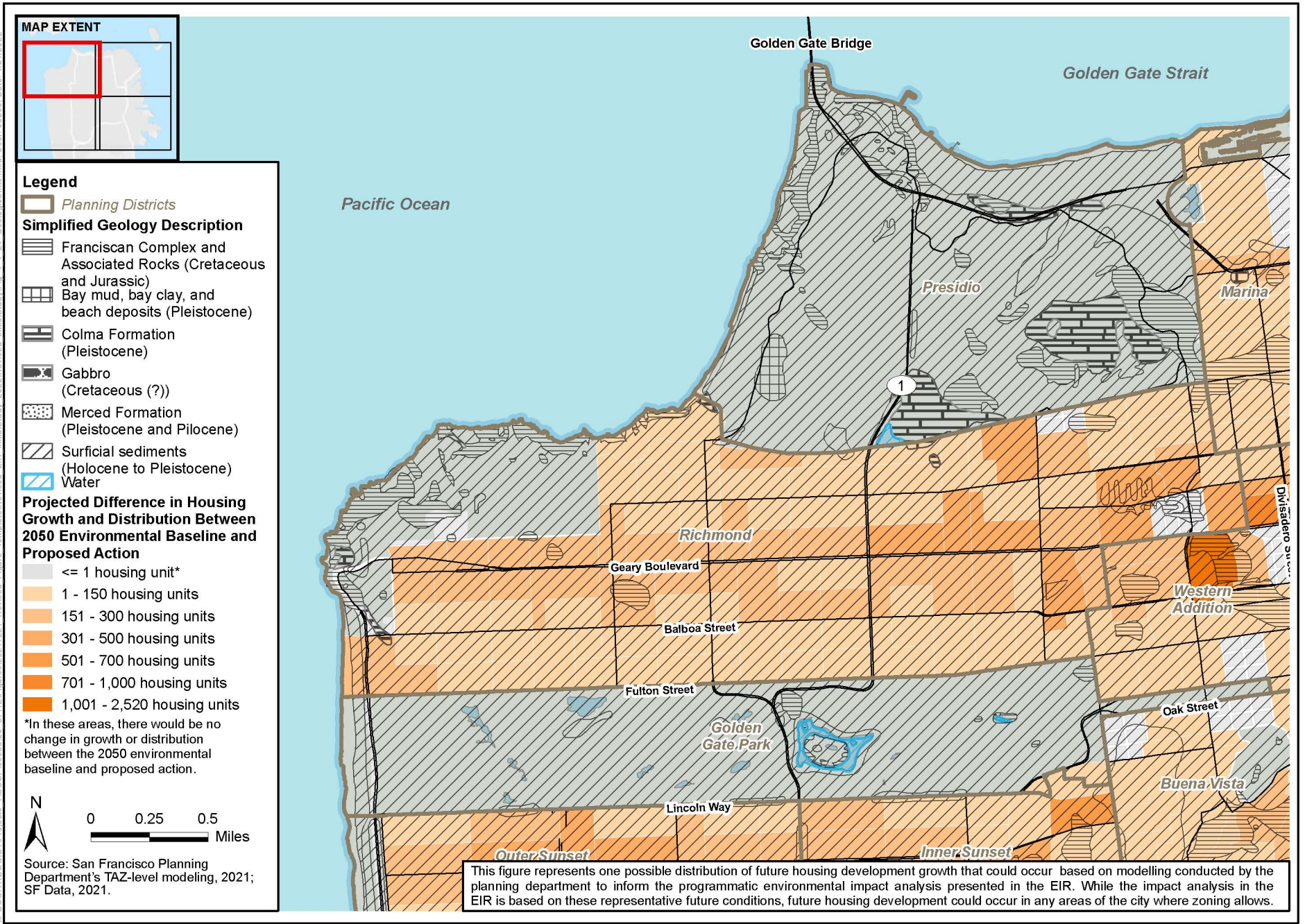
²¹⁸ California Geological Survey, *Earthquake Zones of Required Investigation*, 2021, <https://maps.conservation.ca.gov/cgs/EQZApp/app/> accessed: July 24, 2021.

²¹⁹ Field, E.H., 2014 Working Group on California Earthquake Probabilities, in *UCERF3: A New Earthquake Forecast for California's Complex Fault System*, U.S. Geological Survey, 2015, <https://dx.doi.org/10.3133/fs20153009>, accessed: July 29, 2021.

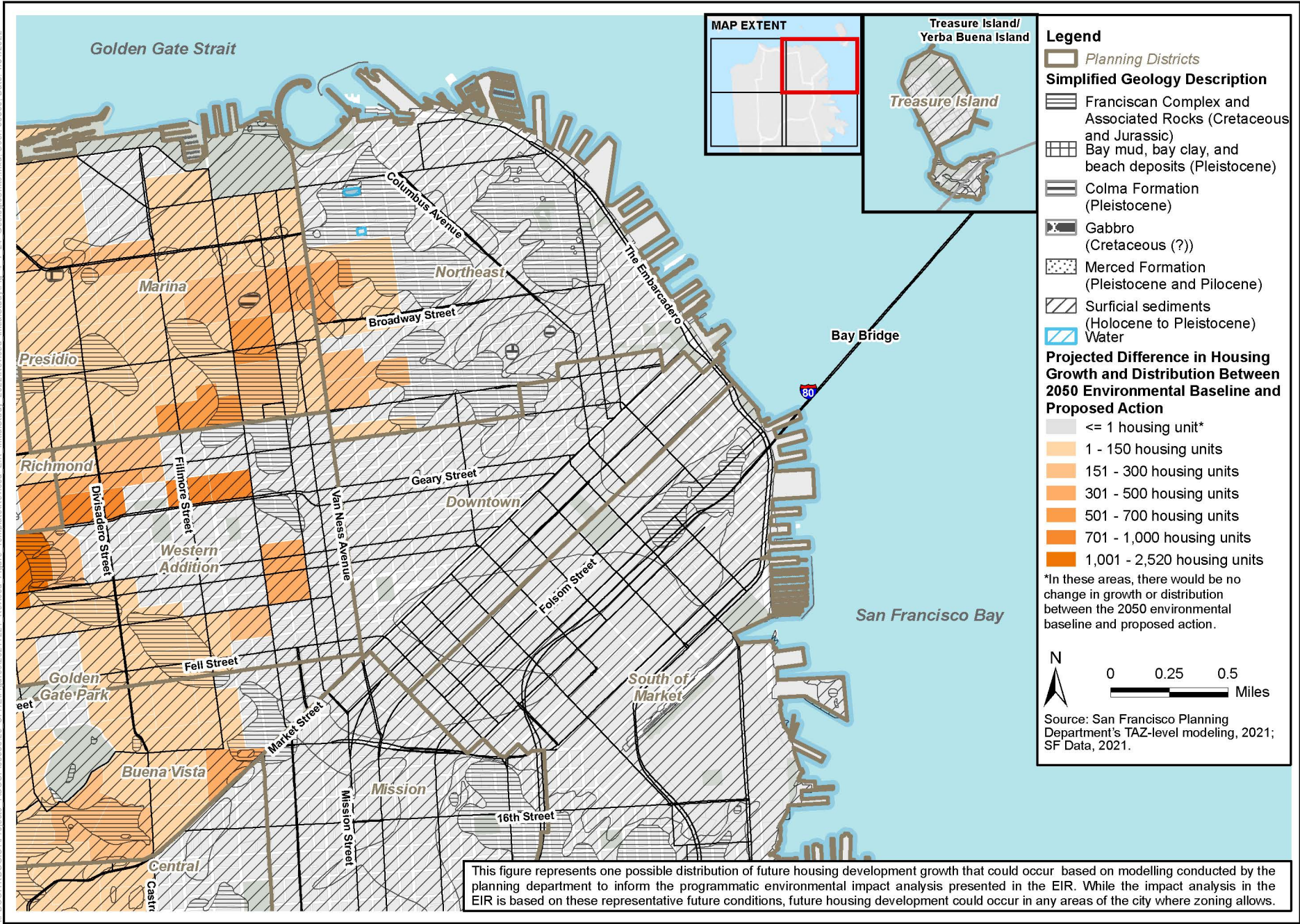
²²⁰ City of San Francisco, *San Francisco General Plan*, Community Safety Element, 2012, <https://generalplan.sfplanning.org/>, accessed: July 13, 2021.

²²¹ Ibid.

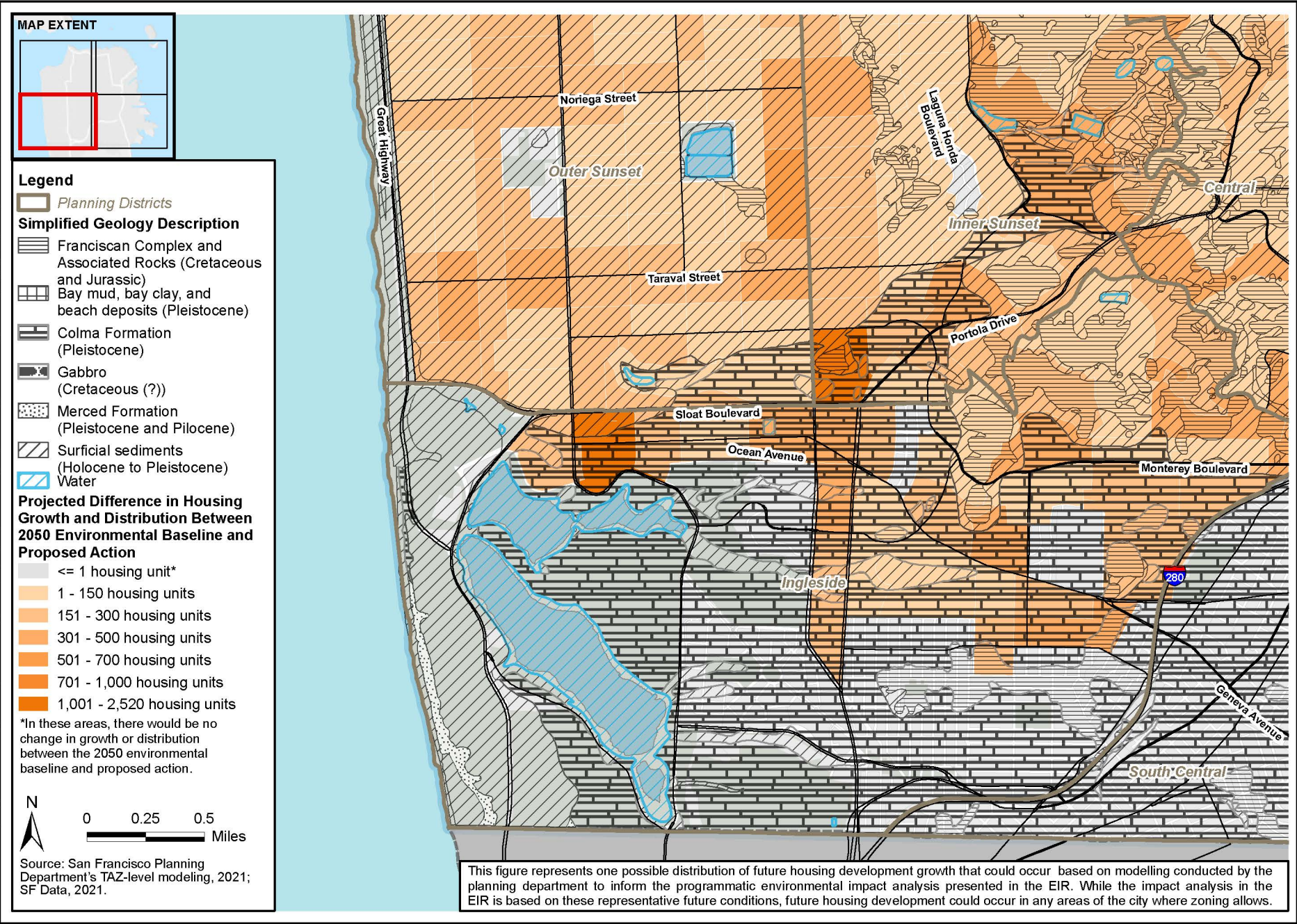
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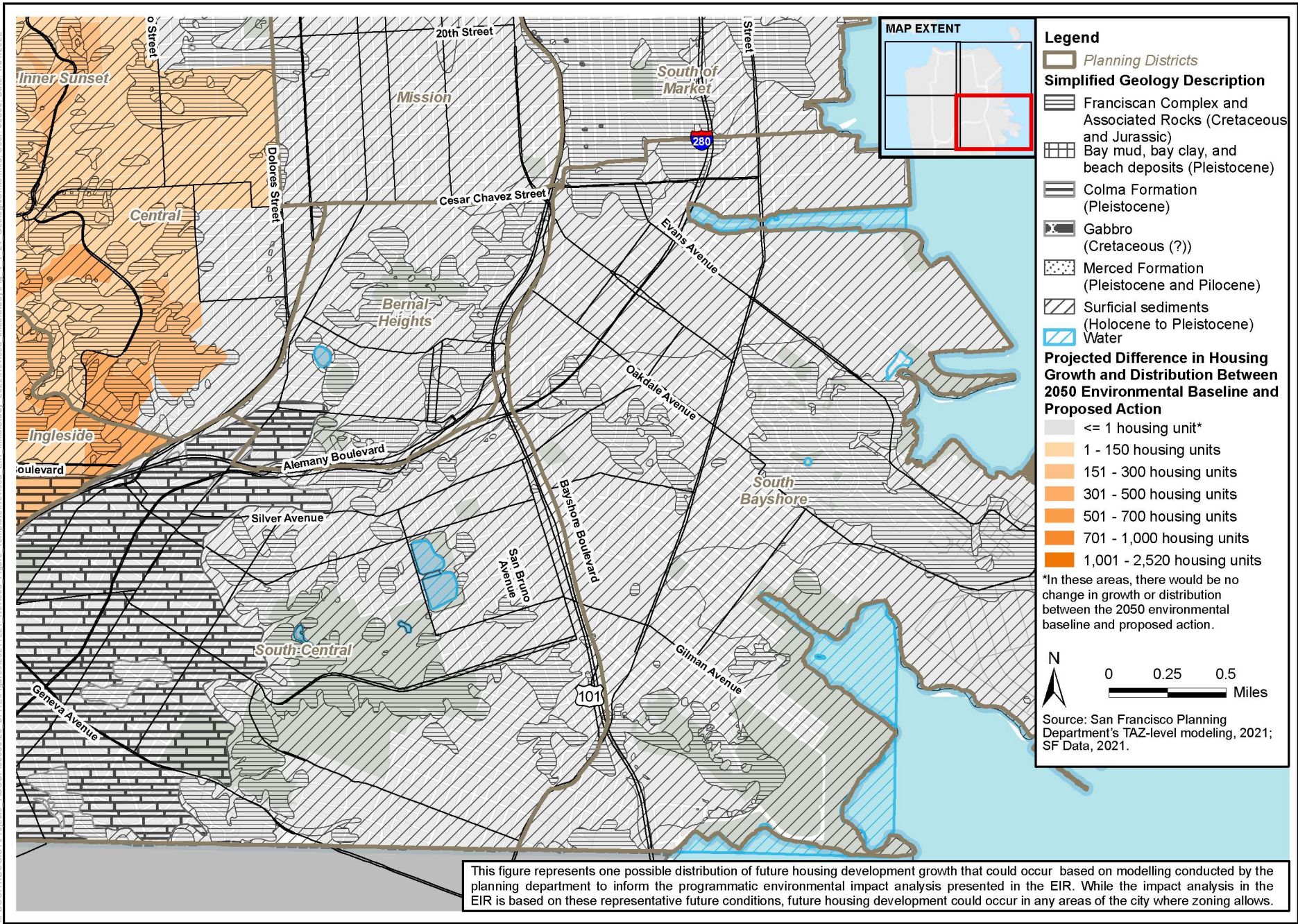
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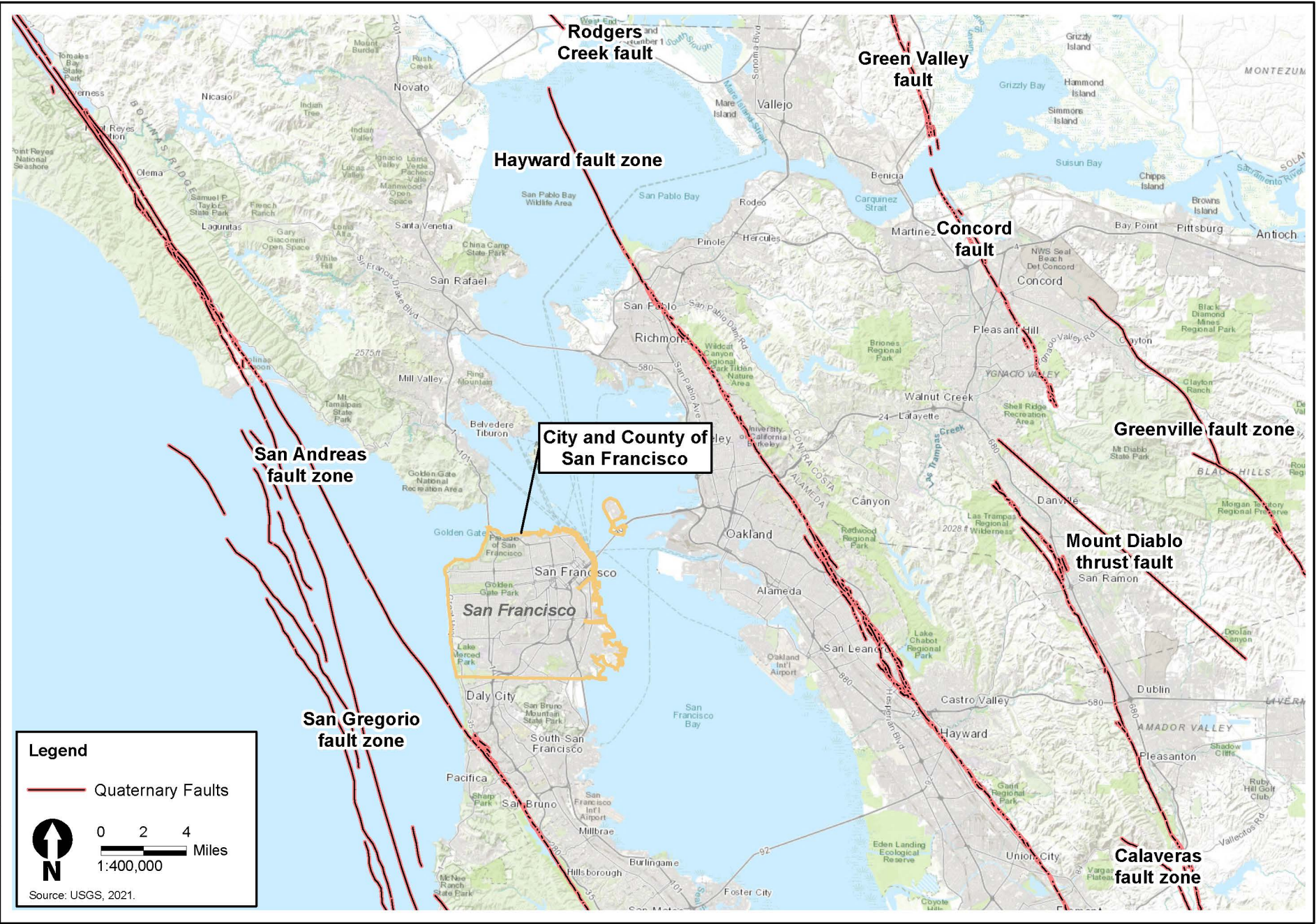


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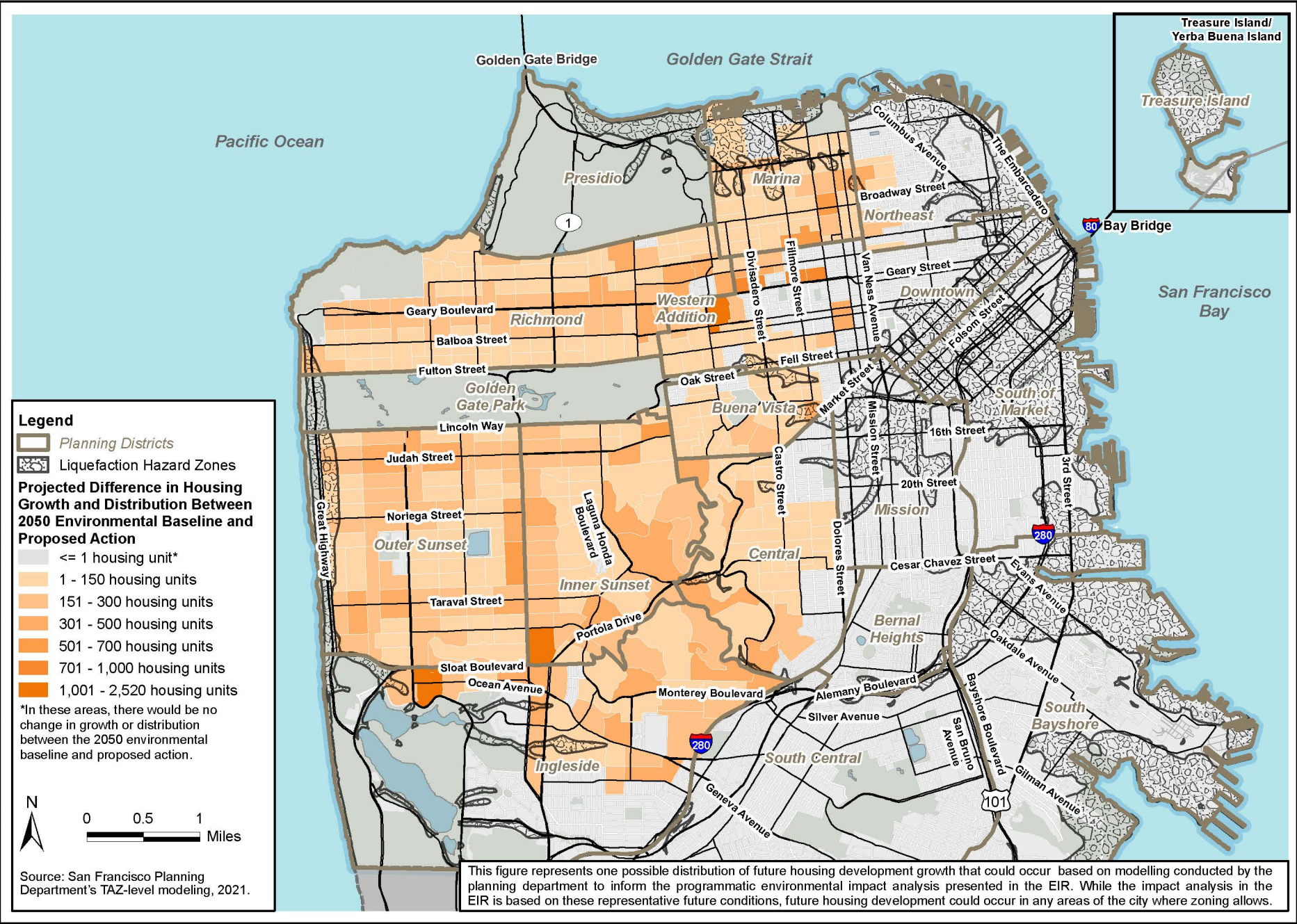


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liquefaction hazards also exist in other areas of the city. These liquefaction hazard areas tend to be underlain with loose, water-saturated granular sediments located within 40 feet of the ground surface. These are prevalent primarily in the South of Market area, the Mission District, Hunters Point, and in areas along the waterfront that are underlain with artificial fill as well as the Marina and Treasure Island. Liquefiable soils also exist in the sandy low-lying areas along the oceanfront and Lake Merced.²²² The liquefaction-induced damage resulting from the Loma Prieta earthquake occurred in the Marina District and on Treasure Island.²²³

Lateral spreading is a type of landslide that forms on slopes, from gentle to steeper, when liquefiable soils are shaken. It has a rapid, liquid-like movement. It occurs where there is a free, unconstrained face, such as a streambank or cliff, past which sediments can freely move. As shown in **Figures 4.1-23a** through **4.1-23d**, pp. 4.1-150 through 4.1-153, slopes of greater than 25 percent occur throughout the city. Where such areas are underlain with liquefiable soils as in the Marina and the Western Shoreline (see **Figure 4.1-25**, p. 4.1-159), there could be a substantial risk of lateral spreading.

REGULATORY FRAMEWORK

State

Alquist-Priolo Earthquake Fault Zone

California's Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) is intended to reduce risks to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults capable of surface rupture or fault creep (earthquake fault zones). The act also defines criteria for identifying active faults, giving legal weight to terms such as active, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 is intended to reduce damage resulting from earthquakes. Although the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act (i.e., the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped seismic hazard zones).

²²² Ibid.

²²³ Seed, R.B., M.F. Riemer, and S.E. Dickenson, *Liquefaction of Soils in the 1989 Loma Prieta Earthquake*, International Conferences on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, 1991, <https://scholarsmine.mst.edu/cgi/viewcontent.cgi?article=3580&context=icrageesd>, accessed: July 13, 2021.

California Building Standards Code

The California Building Standards Code (state building code) provides the minimum standards for structural design and construction. The state building code states that the “classification of the soil at each building site will be determined when required by the building official” and that “the classification will be based on observation and any necessary test of the materials disclosed by borings or excavations.” In addition, the code states that “the soil classification and design-bearing capacity will be shown on the (building) plans, unless the foundation conforms to specified requirements.” The building code provides standards for various aspects of construction, including (i.e., not limited to) excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. The code requires extensive geotechnical analysis and engineering for grading, foundations, retaining walls, shoring, underpinning at adjacent development, and other structures. Criteria for seismic design are also included. Section 1803.6 includes specific requirements related to submittal of a geotechnical investigation.

Local

San Francisco Building Code

The building code consists of the 2019 state building code with local amendments. It enforces the minimum standards found in the various codes adopted by the state through the building standards commission and as adopted and amended by the city. Administrative bulletins are part of the building code and document local requirements and the procedures to be followed by permit applicants, the San Francisco Department of Building Inspection (building department), and other agencies involved in the regulatory functions of the building department. In addition, the local building code identifies slope protection areas within the city, allowing the building department to impose additional requirements and structural design reviews related to slope stability and structural design. Furthermore, as described below, the local building code imposes requirements for building permit reviews for tall buildings (i.e., more than 240 feet tall). Specific local code provisions are discussed in more detail below.

Slope and Seismic Hazard Zone Protection Act

The Slope and Seismic Hazard Zone Protection Act (slope protection act) applies to all properties within the city with an average slope that exceeds 4H:1V (25 percent) as well as properties in other mapped areas. It requires additional review for structural integrity and effects on slope stability. Information Sheet S-19, Properties Subject to the Slope and Seismic Hazard Zone Protection Act, clarifies the permit process for projects subject to the slope protection act.²²⁴ Project applicants are required to submit a completed slope protection act checklist to the building department to determine the appropriate project review tier. If the property falls within an earthquake-induced landslide hazard zone and the project includes certain proposed construction features or requires activities (e.g., shoring, underpinning) that may affect slope stability, the building department may require the permit application be subject to review by a structural advisory committee.

²²⁴ San Francisco Department of Building Inspection, *Information Sheet S-19, Properties Subject to the Slope and Seismic Hazard Zone Protection Act (SSPA) Ordinance*, October 2, 2018, <https://sfdbi.org/sites/default/files/IS%20S-19.pdf>, accessed October 18, 2021.

Administrative Bulletin-082, Guidelines and Procedures for Structural Design

Administrative Bulletin AB-082, Guidelines and Procedures for Structural, Geotechnical, and Seismic Hazard Engineering Design Review,²²⁵ presents guidelines and procedures for the structural design review of buildings and other structures. Issued on March 25, 2008, and revised November 21, 2018, AB-082 specifies the project types that require structural design review as part of the building permit review and approval process. This bulletin also specifies requirements and guidelines for the design of buildings that are more than 240 feet high to ensure that the design meets the standards of the building code.²²⁶

Administrative Bulletin-083, Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures

Administrative Bulletin AB-083, Requirements and Guidelines for the Seismic Design of New Tall Buildings Using Non-Prescriptive Seismic-Design Procedures, includes requirements and guidelines for seismic structural design and the submittal of documents for buildings permits for new tall buildings in San Francisco that use non-prescriptive seismic design procedures.^{227,228} For the purpose of this bulletin, tall buildings are defined as those greater than 160 feet in height.

Administrative Bulletin-111, Guidelines for Preparation of Geotechnical and Earthquake Ground Motion Reports for Foundation Design and Construction of Tall Buildings

Administrative Bulletin AB-111, Guidelines for Preparation of Geotechnical and Earthquake Ground Motion Reports for Foundation Design and Construction of Tall Buildings, clarifies the requirements and guidelines for developing geotechnical site investigations and preparing geotechnical reports for the foundation design and construction of tall buildings, which are defined as buildings greater than 240 feet in height.

Information Sheet S-05, Geotechnical Report Requirements

Information Sheet S-05, Geotechnical Report Requirements, establishes the permit work scope that requires the submittal of a geotechnical report consistent with the state building code. With some exceptions established in the information sheet, a geotechnical report must be submitted with the permit application for new buildings; horizontal and vertical additions; grading projects; fill projects; footings on/or adjacent to slopes; design soil

²²⁵ San Francisco Department of Building Inspection, Guidelines and Procedures for Structural, Geotechnical, and Seismic Hazard Engineering Design Review, Administrative Bulletin 082, November 21, 2018 (updated January 1, 2020, for code references), <https://export.amlegal.com/api/export-requests/2d74c2d6-3d4e-481a-8f59-85c65c09e70a/download/>, accessed: October 27, 2021.

²²⁶ San Francisco Department of Building Inspection, *Administrative Bulletin No. AB-111, Guidelines for Preparation of Geotechnical and Earthquake Ground Motion Reports for Foundation Design and Construction of Tall Buildings*, June 15, 2020, <https://sfdbi.org/sites/default/files/AB-111%20dated%2006-15-2020.pdf>, accessed: July 28, 2021.

²²⁷ San Francisco Department of Building Inspection, *Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures, Administrative Bulletin 083*, March 25, 2008 (updated January 1, 2014, for code references), https://sfdbi.org/sites/default/files/Documents/Administrative_Bulletins/2013_AB/AB_083_updated_010114.pdf, accessed: July 28, 2021.

²²⁸ As stated in IS-18, SEAONC experts are reviewing the information and procedures in Administrative Bulletin 082 and Administrative Bulletin 083 and may recommend to the director of the building department and the building inspection commission the adoption of modified guidelines for future tall building safety in San Francisco.

lateral loads; special foundations such as piles and piers; projects determined to require a geotechnical report in the building code; permits subject to mandatory structural advisory review; and all structures utilizing modal response spectrum analysis.

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to geology and soils associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42
 - Strong seismic ground shaking
 - Seismically related ground failure, including liquefaction
 - Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, as defined in Table 18 1 B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

The proposed action would have the potential to result in significant paleontological resources impacts. Accordingly, this topic is further analyzed and included in Section 4.10, Paleontological Resources, under Impacts GE-5 and C-GE-2.

Future development consistent with the housing element update would connect to San Francisco's existing sewer system; there would be no use of septic tanks or alternative wastewater disposal systems. Therefore, the septic tanks or alternative wastewater disposal systems topic is not applicable to the proposed action and is not discussed further in this EIR.

There are no unique geologic features in the areas of the city where future development is anticipated consistent with the housing element update; therefore, no impacts on unique geological features would occur as a result of the proposed action. Although portions of the city may be excavated and terraced as a result of future development consistent with the housing element update, the general topography of the area would remain the same. With respect to unique geologic features and topography, there would be no impact; no mitigation measures are necessary. This topic is not discussed further in this EIR.

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

For analysis related to geology and soils, criteria from Appendix G of the CEQA Guidelines were used to determine whether future actions consistent with the housing element update would have a significant impact related to geology, soils, and seismicity. Impacts were assessed based on review of applicable documents including the U.S. Geological Survey data, California Geological Survey maps, city data, and Metropolitan Transportation Commission and Association of Bay Area Governments hazard mapping data, along with other available reports and studies.

Hazards related to development in an area with existing geological hazards, such as an existing landslide or liquefaction hazard or ground shaking due to seismic activity, are not considered impacts under CEQA, unless the project would exacerbate an existing hazard. Therefore, the analysis below considers whether future development projects that are anticipated as an indirect result of the proposed action would exacerbate existing geological hazards within the city.

Construction-related impacts could include erosion, instability resulting from excavation, and unbalanced and seismic loading. The primary operational impact is settlement from seismic densification, including differential settlement.

Impacts and Mitigation Measures

Impact GE-1: The proposed action would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismically related ground failure, liquefaction, or landslides. (*Less than Significant*)

Surface Fault Rupture

As described above, the city is not within an Alquist-Priolo Earthquake Fault Zone, and no known active faults transverse the city. Therefore, future development consistent with the housing element update would not be subject to surface fault rupture. Furthermore, future development consistent with the housing element update would not exacerbate existing conditions that would increase the likelihood of surface fault rupture by stressors on faults. Therefore, the proposed action would not expose people to increased risks as a result of fault rupture. There would be *no impact*, and no mitigation measures are necessary.

Strong Seismic Ground Shaking

As stated above, the U.S. Geological Survey concluded that, overall, there is a 72 percent likelihood of an earthquake of magnitude 6.7 or greater occurring in the San Francisco Bay Area in the 30-year period between 2014 and 2043.²²⁹ The faults nearest the city that are capable of causing strong seismic ground shaking in the project area are the North San Andreas, San Gregorio, Hayward, and Calaveras faults. The city could experience “very strong” (Modified Mercalli Intensity Shaking Severity Level 7) to “violent” shaking (Modified Mercalli Intensity Shaking Severity Level 9) during a seismic event.²³⁰

Future development consistent with the housing element update could be subject to very strong ground shaking in the event of a major earthquake. However, future development consistent with the housing element update would not experience strong ground shaking to an extent that would differ from the baseline. In addition, such development would not cause or change the likelihood of earthquakes to occur or otherwise exacerbate the existing seismic safety hazards in San Francisco. Moreover, new development would be designed and constructed in accordance with the most current building code, which incorporates state and local building code requirements. As discussed below, compliance with these standards would ensure that future development consistent with the proposed action would meet higher seismic safety standards than most of the city’s existing housing stock.

The state building code specifies definitions for seismic sources as well as the procedure used to calculate seismic forces on structures during ground shaking.²³¹ Individual development projects are required to comply with the building code for structural design and submit geotechnical investigations that address seismic hazards and recommend an appropriate foundation to support the proposed structure(s) as well as recommendations to

²²⁹ Field, E.H., 2014 Working Group on California Earthquake Probabilities, in *UCERF3: A New Earthquake Forecast for California’s Complex Fault System*, U.S. Geological Survey, 2015, <https://dx.doi.org/10.3133/fs20153009><https://dx.doi.org/10.3133/fs20153009>, accessed: July 29, 2021.

²³⁰ Metropolitan Transportation Commission and Association of Bay Area Governments, *MTC/ABAG Hazard View Map*, 2021, <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed: July 29, 2021.

²³¹ The state building code is regularly updated, based on discussion and deliberation about building design, construction methods, safety, performance requirements, technological advances, and innovative products.

protect surrounding development during construction. In addition, projects may be subject to additional requirements specified in the building department's implementing procedures as part of the building permit review process. The engineer of record in consultation with the geotechnical engineer for each individual development project would determine necessary engineering and design features for a structure to reduce potential damage from ground shaking and comply with the minimum standards for structural and life safety. During its review of the building permit structural addendum, the building department would review the project's construction documents for conformance with recommendations in the geotechnical report including the appropriate foundation type given the subsurface conditions at the site as well as recommendations for shoring during excavation and underpinning of adjacent development. Project construction documents would be reviewed for conformance with recommendations in the project-specific geotechnical report as well as compliance with the building code and the building department's implementing procedures.

Future development consistent with the housing element update could include buildings with heights ranging from 55 to 240 feet high, with the tallest buildings located along Geary Boulevard and Van Ness Avenue. In accordance with Administrative Bulletins 111, 082, and 083, tall buildings would be designed to meet strict seismic performance standards.

Consistent with the state building code and Information Sheet S-05, Geotechnical Report Requirements, future development consistent with the housing element update would be required to conduct project-specific geotechnical site investigations. Pursuant to Administrative Bulletin 082, certain projects would also be subject to independent engineering design review by qualified engineering and geotechnical professionals and geologists, if appropriate, to review the geotechnical reports prepared for foundation design and construction.²³² The required project-specific geotechnical review would consider foundation type (shallow or deep), foundation design, geotechnical and geological investigations, soil/foundation/structure interaction under static and seismic loading conditions, effects of dewatering and construction-related activities on the site and in the vicinity, and anticipated foundation or building settlement. In addition, for buildings greater than 240 feet in height, project sponsors may be required to contract qualified monitoring surveyors and instrumentation engineers to monitor the effects of settlement on the building and foundations for a period of 10 years after the issuance of the certificate of final completion and occupancy.

Compliance with the applicable building code standards and recommendations identified above would ensure that future development consistent with the housing element update would be designed and constructed in accordance with current structural, geotechnical, and seismic standards.

As described above, development consistent with the housing element update would be designed to resist seismic and geologic hazards, in compliance with applicable codes and design standards, which take into account the expected seismic conditions in the project vicinity. Furthermore, development consistent with the housing element update would not exacerbate the existing seismic hazards in San Francisco. The impact would be *less than significant*, and no mitigation measures are necessary.

²³² A qualified geotechnical reviewer for engineering design review teams shall be a geotechnical engineer (G.E.) registered in California or a civil engineer (C.E.) registered in California with substantially demonstrated geotechnical experience.

Seismically Related Ground Failure, including Liquefaction

As discussed under “Environmental Setting,” above, and shown in **Figure 4.1-25**, p. 4.1-159, several portions of the city are within a liquefaction hazard zone. In addition, areas underlain with sands could be subject to seismic densification. Therefore, development consistent with the housing element update could be subject to both liquefaction and earthquake-induced settlement. However, such development would not cause or change the likelihood of liquefaction to occur or otherwise exacerbate the existing liquefaction hazards in San Francisco. In addition, as shown in **Figure 4.1-25**, future development consistent with the housing element update would direct an increased share of future growth to areas of the city that are not subject to liquefaction. Moreover, the building code specifies that soils that are potentially subject to seismically induced liquefaction must be addressed during construction with appropriate measures as identified in the site-specific geotechnical investigation. These measures can include an appropriate foundation type and depth, appropriate structural systems to accommodate anticipated displacements and forces, and ground stabilization measures. For ground stabilization, potentially liquefiable sand may, for example, be removed in conjunction with excavation for the basement levels; ground improvements may be made on the soils that remain. In addition, any buildings constructed consistent with the proposed action would be supported on foundations determined appropriate by site-specific geotechnical investigations and designed in accordance with the building code.

Individual development sites may require soil improvement, based on site conditions. Soil improvements can stabilize weak soils, eliminating the need for deep foundations, and include methods such as compaction (dropping a heavy weight on the surface); surcharging (placing soil fill onsite to consolidate existing soil); reinforcing (inserting stone columns or steel bars into the soil); and soil mixing (adding a binder such as Portland cement, fly ash, or blast furnace slag in slurry form to existing soils).²³³ Construction documents specifying the structural design, including the type of foundation, would be reviewed by the building department for conformance with recommendations in the geotechnical report during review of the building permits. Soils that could liquefy or experience earthquake-induced settlement would be removed during construction and/or soil improvement techniques would be implemented in conjunction with development of the structural foundation design. Removal of potentially liquefiable materials and/or implementation of soil improvement techniques, along with appropriate foundation designs, would reduce the potential for settlement within building footprints.

To address the potential for liquefaction and earthquake-induced settlement, the building department refers to sources such as maps of special geologic study areas and known liquefaction areas in San Francisco. Future development consistent with the housing element update located in areas subject to liquefaction would be required to comply with the state Seismic Hazards Mapping Act. Accordingly, any such development would be required to prepare a geotechnical report assessing the nature and severity of the hazard on the site and recommend project design and construction features that would reduce the hazards. The building department would review the building plans and geotechnical report to ensure that the recommended engineering and design features would be included in the project.

²³³ Pilebuck, *Soil Improvement: Methods to Enhance Soft Ground Conditions*, July 10, 2017, <https://pilebuck.com/foundation/soil-improvement-methods-enhance-soft-ground-conditions/>, accessed October 18, 2021.

As stated above, administrative bulletin 082 specifies the guidelines and procedures for structural, geotechnical, and seismic hazard engineering design review and clarifies the site conditions and scope of work that would require engineering design peer review. The design of any proposed building more than 160 feet tall could be subject to compliance with Administrative Bulletin 083 for non-prescriptive design and peer review. In addition, local building code requirements, including Administrative Bulletin 082 and Administrative Bulletin 111 regarding structural design review for buildings taller than 240 feet, would require peer review of the project's site conditions and design, including the foundation, by an engineering design review team, along with monitoring for settlement during the 10-year period after the certificate of completion and occupancy is issued.

Compliance with current state and local regulations would ensure that future development consistent with the housing element update would meet higher safety standards for liquefaction and earthquake-induced ground settlement than most of the city's existing housing stock. Therefore, future development projects consistent with the housing element update would not exacerbate the existing liquefaction and earthquake-induced settlement hazards in San Francisco. This impact would be *less than significant*, and no mitigation measures are necessary.

Landslides

As discussed under "Environmental Setting," above, and shown in **Figures 4.1-23a** through **4.1-23d**, pp. 4.1-150 through 4.1-153, the city has a varied topography, with approximately 3 percent of the land located in an earthquake-induced landslide hazard zone;²³⁴ other parts of the city are located in slope protection areas and/or on slopes of more than 25 percent. Therefore, future development projects consistent with the housing element could be subject to risks resulting from landslides. However, as shown in **Figures 4.1-23a** through **4.1-23d**, the majority of future development consistent with the housing element update would occur in the western and northern sides of the city, in areas with fewer slopes of more than 25 percent, fewer slope protection areas, and fewer landslide hazard zones. Although new housing unit growth is also projected in the central portion of the city, in the vicinity of Laguna Honda Boulevard, an area where steep slopes are prevalent, housing development on steep slopes is not unusual in the city, and the housing element update would not substantially increase housing development in these areas relative to the 2050 environmental baseline. Therefore, future development consistent with the housing element update would generally occur in areas with fewer slopes, fewer slope protection areas, and fewer landslide hazard zones compared to the 2050 environmental baseline. Moreover, project sites in an area with an average slope of 25 percent or more may be subject to the requirements of the slope protection act.

As described in Information Sheet S-19, projects within landslide hazard zones, including projects that may affect slope stability, may require permit application review by a structural advisory committee. The committee, which would comprise qualified professionals (e.g., in the fields of geotechnical, engineering, geology), would advise on matters of design and construction that may affect slope stability or create the potential for earthquake-induced landslides. The committee may also consider ground slopes, soil type, geological conditions, along with other factors, and verify the project considered geological and geotechnical issues and proposed appropriate strategies to reduce impacts.

²³⁴ City of San Francisco, *San Francisco General Plan*, Community Safety Element, 2012, <https://generalplan.sfplanning.org/>, accessed: July 13, 2021.

Compliance with current state and local regulations would ensure that future development consistent with the housing element update would meet higher safety standards regarding landslide risk than most of the city's existing housing stock. Therefore, future development projects consistent with the housing element update would not exacerbate the existing landslide-related hazards in San Francisco. This impact would be *less than significant*, and no mitigation measures are necessary.

Impact GE-2: The proposed action would not result in substantial soil erosion or the loss of topsoil. (*Less than Significant*)

The areas of the city where future development consistent with the housing element update would be located is primarily built out and covered with impervious surfaces, including buildings and parking lots, although some vacant/unimproved lots would also likely be developed. Although a small number of unimproved lots are located in areas of future development consistent with the housing element update, the number of these lots is small, the lots are typically surrounded by development, roads, and other improvements, and the lots would be expected to be developed under the 2050 environmental baseline, regardless of the housing element update.

Although the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to areas primarily on the west and north sides of the city, the shift would be to areas that are primarily built out; therefore, the difference between the proposed action and the 2050 environmental baseline would not be substantial with respect to a loss of topsoil. Previous construction has already removed topsoil from most areas that would be developed or redeveloped for future development consistent with the housing element update. Therefore, impacts related to the loss of topsoil would be *less than significant*, and no mitigation measures are necessary.

Soil movement for foundation excavation could create the potential for wind- and water-borne soil erosion. Development consistent with the housing element update like all construction sites in San Francisco must implement best management practices (BMPs) for sediment and erosion control. In addition, future actions consistent with the housing element update that disturb between 5,000 square feet and 1 acre of ground surface would be required, at a minimum, to implement an erosion and sediment control plan for construction activities, in accordance with article 4.1 of the San Francisco Public Works Code, and, depending on the site size, a stormwater pollution prevention plan (discussed in "Hydrology and Water Quality" in this section) to reduce the impact of runoff from each construction site. The SFPUC must review and approve erosion and sediment control plans prior to implementation and conduct periodic inspections to ensure compliance with each plan.²³⁵ Operational impacts related to erosion from construction consistent with the housing element update would be minimal as the building code includes requirements designed to support adequate site drainage, which would reduce potential impacts on neighboring development. With adherence to the above requirements, impacts related to soil erosion and the loss of topsoil would be *less than significant*, and no mitigation measures are necessary.

²³⁵ San Francisco Public Utilities Commission, Construction Site Runoff Control Program, <https://sfpuc.org/programs/pre-treatment-program/construction-site-runoff>, accessed: March 24, 2022.

Impact GE-3: The proposed action would not result in a substantial risk of loss, injury, or death involving unstable geologic units or soils or onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. (*Less than Significant*)

Future development consistent with the housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and in low-density areas. It could also induce ground settlement as a result of excavation. However, the majority of future development consistent with the housing element update would occur in areas with deep groundwater and soils that are less prone to settlement and therefore less likely to result in unstable geologic conditions. Therefore, future development consistent with the housing element update would generally occur in areas that are less prone to settlement compared to the 2050 environmental baseline. In addition, the building department requires site-specific geotechnical reports for development projects. Geotechnical reports are reviewed by the building department to ensure they contain the required information specified in section 1803.6 of the building code. These requirements include a record of the soil profile; the elevation of the water table, if encountered during the investigation; recommendations for the foundation type as well as the design criteria for the proposal, including, but not limited to, the bearing capacity of natural or compacted soil; provisions for reducing the effects of expansive soils; mitigation for the effects of liquefaction, differential settlement, and varying degrees of soil strength; and a determination of the effects of adjacent loads. In addition, project-specific geotechnical reports must specify expected total and differential settlement. Pursuant to state building code Chapter 17, Special Inspections and Tests, when an application is made to the building official for certain types of construction, the owner or the owner's authorized agent shall employ an authorized agent to provide special inspections and tests during construction and identify the approved agency to the building official.²³⁶ If inspections are required, then reports of inspections and tests in conformance with approved construction documents²³⁷ shall be provided to the building department. Special inspections²³⁸ and tests involving site²³⁹ soil conditions, fill placement, and load-bearing characteristics must be performed in accordance with state building code section 1705.6 and Table 1705.6. Administrative bulletin AB-111 provides that geotechnical investigations for tall buildings (those greater than 240 feet in height) address shoring, dewatering, excavation, underpinning and construction monitoring. Compliance with building code requirements would ensure that future development consistent with the housing element update would not result in a substantial risk of loss, injury, or death involving unstable geologic units or soils or onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, this impact would be *less than significant*, and no mitigation measures are necessary.

²³⁶ California Building Code 2019, Chapter 17 Special Inspections and Tests, Section 1704 Special Inspections and Tests, Contractor Responsibility and Structural Observation, <https://up.codes/viewer/california/ibc-2018/chapter/17/special-inspections-and-tests#1704>, accessed October 26, 2021.

²³⁷ California Building Code 2019, [A] Construction Documents, https://up.codes/viewer/california/ibc-2018/chapter/2/definitions#construction_documents, accessed October 28, 2021.

²³⁸ California Building Code 2019, [BS] Special Inspection, https://up.codes/viewer/california/ibc-2018/chapter/2/definitions#special_inspection, accessed October 28, 2021.

²³⁹ California Building Code 2019, [BG] Site, <https://up.codes/viewer/california/ibc-2018/chapter/2/definitions#site>, accessed October 28, 2021.

Impact GE-4: The proposed action would not result in a substantial risk of loss, injury, or death related to expansive soils. (*Less than Significant*)

As discussed under “Environmental Setting,” above, the city is underlain by a variety of soil types, some of which are generally considered non-expansive (artificial fill, dune sand, Colma Foundation), some of which are potentially expansive, and some of which are expansive (such as soils encountered in the Presidio and Bayview Hunters Point). However, as shown in **Figures 4.1-24a** through **4.1-24d**, pp. 4.1-155 through 4.1-158, the majority of the areas where future housing development associated with the housing element update would occur is in the west and north sides of the city, in areas underlain with Dune sand or Colma Formation, which have a low clay content and are generally non-expansive. Therefore, construction consistent with the housing element update would not substantially increase housing development in areas underlain with expansive soils relative to the 2050 environmental baseline. Moreover, as discussed under Impact GE-1, above, all projects would be required to comply with the building code for structural design and submit a geotechnical report. The geotechnical report would be reviewed by the building department to ensure that it contains the required information specified in section 1803.6 of the building code. These requirements include a record of the soil profile as well as provisions for reducing the effects of expansive soils. Therefore, impacts related to expansive soils would be *less than significant*, and no mitigation measures are necessary.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update’s environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco’s Waterfront Plan Update, Bay Area Rapid Transit’s Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-GE-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on geology and soils. (*Less than Significant*)

Impacts associated with geology, soils, and seismicity are generally site-specific. In general, only cumulative projects occurring on adjacent sites have the potential to combine to result in significant cumulative impacts related to geology and soils. The cumulative projects identified above do not overlap with the proposed action and would not combine to create a significant cumulative impact. All future development consistent with the housing element update would be subject to state and local building codes and regulations. Therefore, the potential for future development consistent with the housing element update to combine with other projects to create a significant cumulative impact related to geology, soils, and seismicity would be *less than significant*.

Hydrology and Water Quality

ENVIRONMENTAL SETTING²⁴⁰

The environmental setting for hydrology and water quality includes descriptions for surface water hydrology, groundwater hydrology, surface water quality, groundwater quality, and flooding.

Surface Water Hydrology

The housing element update would occur within the city, which is bordered by the Pacific Ocean to the west and San Francisco Bay to the north and east. The city is within the following subwatersheds: the Angel Island San Francisco Bay Estuaries subwatershed, Lobos Creek-Frontal San Francisco Bay Estuaries subwatershed, San Francisco Bay Estuaries subwatershed, San Pedro Creek-Frontal Pacific Ocean subwatershed, and the Visitacion Valley-Frontal San Francisco Bay Estuaries subwatershed of the larger San Francisco Bay watershed.²⁴¹

The city is a highly developed environment. This dense, urban area is generally paved, with topography that ranges from flat to steep. Runoff in most areas of the city is collected by the city's combined stormwater and sewer system. The existing impervious acreage citywide is approximately 15,800 acres and is shown in **Figure 4.1-27**. The city is geographically divided into two wastewater and stormwater drainages, the Bayside and Westside wastewater and stormwater drainages, as shown in **Figure 4.1-28**, p. 4.1-175. Approximately 90 percent of stormwater in San Francisco is collected in San Francisco's combined sanitary and stormwater sewer system. The remaining approximately 10 percent is collected by a separate storm sewer, which covers parts of Ocean Beach, the Marina, the Embarcadero, the Mission Bay area, Islais Creek, Candlestick Point, Treasure and Yerba Buena islands and the area surrounding Lake Merced. See Section 4.9, Utilities and Service Systems, for a detailed description of the city's combined sewer system and additional information on stormwater drainage facilities.

Groundwater Hydrology

The city is within the following groundwater basins: Marina (ID 2-39), Downtown (ID 2-40), Lobos (ID 2-38), Westside (ID 2-35), Islais Valley (ID 2-33), South San Francisco (ID 2-27), and Visitacion Valley (ID 2-32).²⁴² Groundwater currently being used within the city for municipal and potable use is pumped from the Westside Basin. Since 2017, between 0.01 percent (2017) and 0.49 percent (2021) of the city's potable water supply has come from groundwater pumped from the Westside Basin. Groundwater from the Westside Basin is also used for irrigation and other non-potable uses at Golden Gate Park, the San Francisco Zoo, Lake Merced golf courses, and nearby cemeteries. No groundwater from any of the other basins is currently being used.

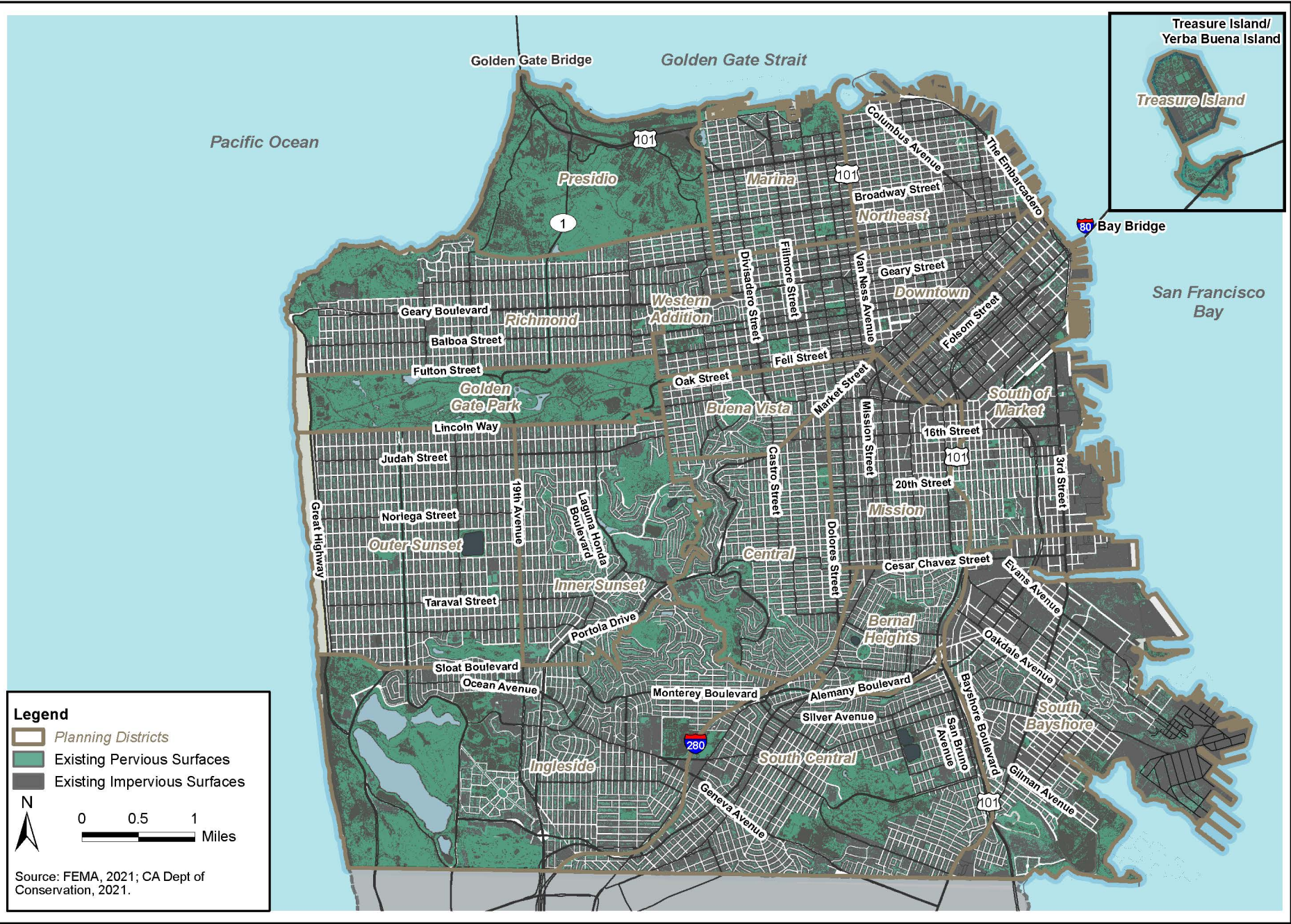
Because of underlying geological formations, depths to groundwater range from 5 feet near the coast and San Francisco Bay to 300 feet within the Westside groundwater basin. Seasonally, groundwater levels fluctuate a few feet. **Figure 4.1-29**, p. 4.1-176, shows approximate depth to shallow groundwater levels within the city.

²⁴⁰ For this topic, *existing conditions* is defined as the conditions in 2022, the year for which the most recent applicable data are available.

²⁴¹ U.S. Environmental Protection Agency, *My Waterway*, <https://mywaterway.epa.gov/community>, accessed: August 2, 2021.

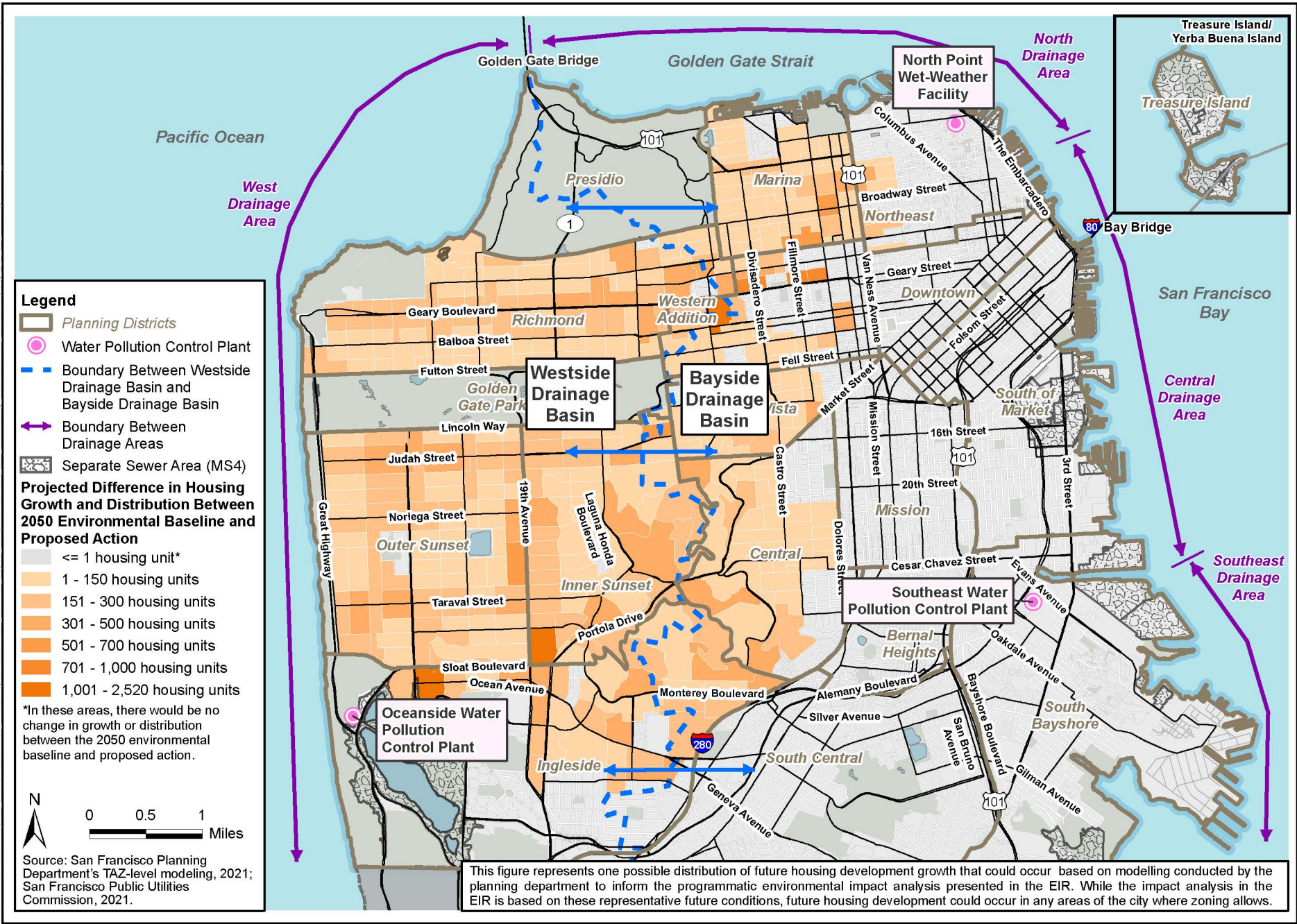
²⁴² San Francisco Bay Regional Water Quality Control Board, *San Francisco Bay Basin (Region 2) Water Quality Control Plan*, 2007, last updated: January 14, 2021, <https://dwr.maps.arcgis.com/apps/Styler/index.html?appid=740d10eefd6148579321a3abcd065a36>, accessed: July 27, 2021.

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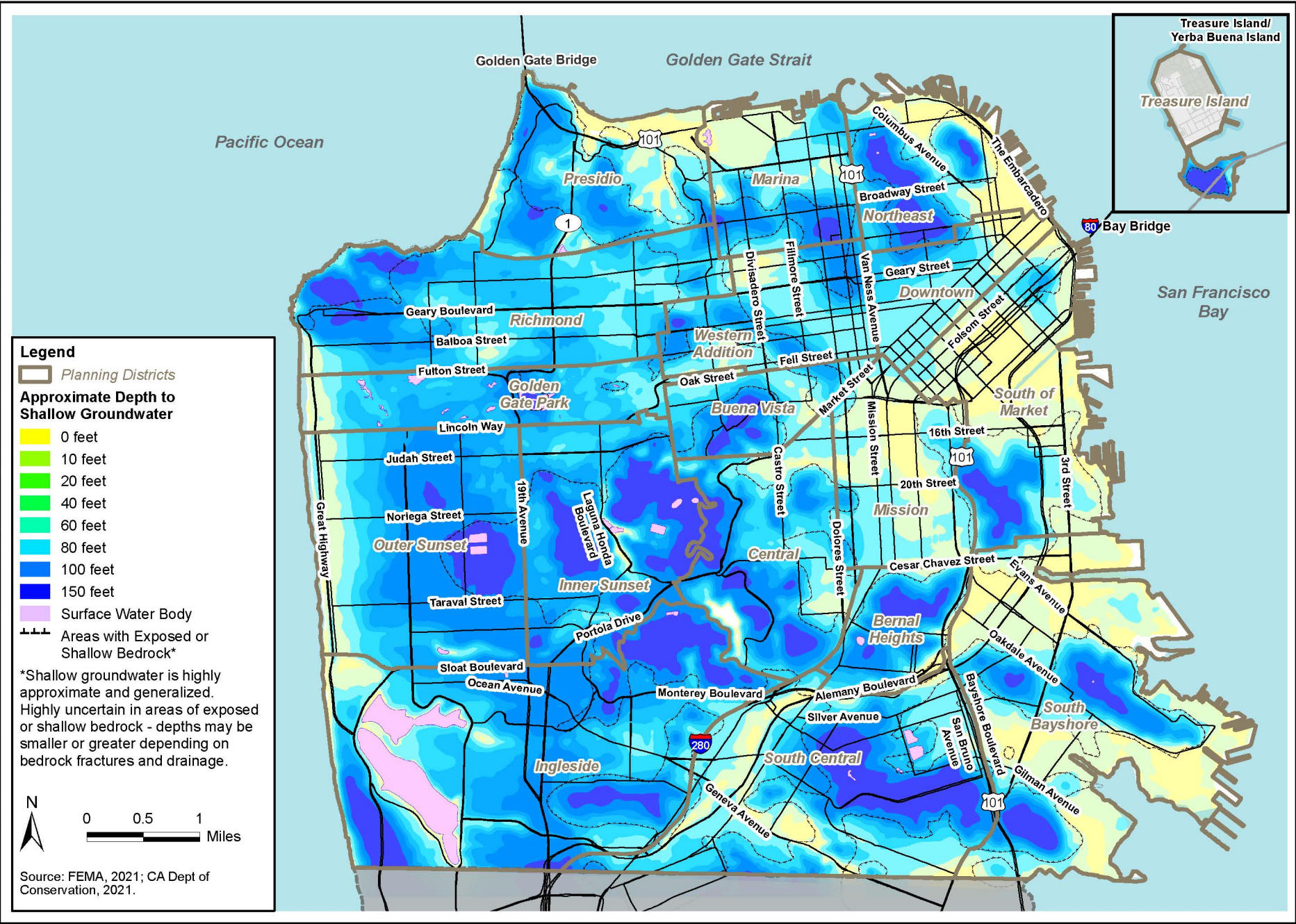
Figure 4.1-27
Existing Impervious Surfaces



Source: San Francisco Planning Department's TAZ-level modeling, 2021; San Francisco Public Utilities Commission, 2021.

This figure represents one possible distribution of future housing development growth that could occur based on modelling conducted by the planning department to inform the programmatic environmental impact analysis presented in the EIR. While the impact analysis in the EIR is based on these representative future conditions, future housing development could occur in any areas of the city where zoning allows.

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Surface Water Quality

The San Francisco Bay Regional Water Quality Control Board²⁴³ (regional board) has listed the following surface waters as impaired water bodies within the city:

- **San Francisco Bay (Central).** San Francisco Bay (Central) is listed as an impaired water body for chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, dioxin compounds, furan compounds, invasive species, mercury, polychlorinated biphenyls (PCBs) including dioxin-like compounds, selenium, and trash.
- **San Francisco Bay (Lower).** San Francisco Bay (Lower) is listed as an impaired water body for DDT, dieldrin, dioxin compounds, furan compounds, invasive species, mercury, chlordane, PCBs including dioxin like compounds, and trash.
- **Islais Creek.** Islais Creek is listed as an impaired water body for ammonia, chlordane, dieldrin, hydrogen sulfide, polycyclic aromatic hydrocarbons (PAHs), and toxicity.
- **Lake Merced.** Lake Merced is listed as an impaired water body for oxygen (dissolved) and pH.
- **Mission Creek.** Mission Creek is listed as an impaired water body for ammonia, chlordane, dieldrin, hydrogen sulfide, lead, mercury, PAHs, PCBs, silver, and zinc.

Most of San Francisco is served by the combined sewer system, which mixes stormwater with sewage and conveys the combined effluent to treatment plants for treatment prior to being discharged. There are three treatment plants in the city. The Oceanside Water Pollution Control Plant (Oceanside Plant) treats dry- and wet-weather flows for the west side of the city and treated an average dry-weather flow of 12.0 mgd in 2020. The Oceanside Plant has a permitted dry-weather treatment capacity of 43 mgd; during storm events, it can treat up to 65 mgd.²⁴⁴ In the southeastern portion of the city, the Southeast Water Pollution Control Plant (Southeast Plant) treated an average dry-weather flow of 56.2 mgd in 2020. The Southeast Plant has a permitted dry-weather treatment capacity of 85.4 mgd; during storm events, it can treat up to 250 mgd. The North Point Wet-Weather Facility (North Point Facility) provides additional wet-weather treatment capacity in the northeastern part of the city. The North Point Facility has the capacity to treat 150 mgd of wet-weather flow.²⁴⁵ During wet weather, the capacity of the treatment plants is supplemented by a series of storage/transport boxes, which are located around the perimeter of the city. If wet-weather flows exceed the capacity of the overall system, the excess, which is approximately 94 percent stormwater, is discharged from one of the 36 combined sewer discharge structures along the city's bay and ocean shorelines. A map of the facilities is provided in **Figure 4.1-28**, p. 4.1-175.

²⁴³ State Water Resources Control Board *2018 Integrated Report*, Clean Water Act Section 303(d) List/305(b) Report, last updated: 2020, <https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=e2def63ccef54eedbee4ad726ab1552c>, accessed: March 24, 2022.

²⁴⁴ Regional Water Quality Control Board, San Francisco Bay Region, *CA0037681: City and County of San Francisco Oceanside Water Pollution Control Plant, Wastewater Collection System, and Westside Recycled Water Project, San Francisco, CA, 2020*, https://www.epa.gov/sites/default/files/2020-04/documents/order-r2-2019-0028_npdes-ca0037681-city-county-san-francisco-2019-12-10.pdf, accessed October 24, 2021.

²⁴⁵ Ibid.

Groundwater Quality

Groundwater quality throughout most of the region is suitable for most urban and agricultural uses, with only local impairments. The primary constituents of concern are high levels of total dissolved solids, along with nitrates, and hexavalent chromium.^{246, 247, 248} Total dissolved solids in the Westside Basin, where groundwater is pumped for municipal and potable uses, are well below the recommended water quality threshold of 500 milligrams per liter.²⁴⁹ In the Marina and Downtown basins, high concentrations of nitrates, iron, and manganese and elevated levels of chloride, boron, and total dissolved solids are typically found in groundwater; elevated concentrations of nitrates and chloride are also common, especially at shallower depths.^{250, 251} In the Lobos Basin, total dissolved solids are between 200 and 700 milligrams per liter where there are high concentrations of nitrates, chloride, boron, and total dissolved solids.²⁵² In parts of the city that are not considered for groundwater supply, total dissolved solids are higher, mostly due to saline water in old fill along the bayshore.²⁵³ Nitrate-nitrogen concentrations in the groundwater within the Westside Basin commonly exceed the primary maximum contaminant level of 10 milligrams per liter.²⁵⁴

Coastal Flooding

Low-lying areas along San Francisco's bay and ocean shorelines are vulnerable to coastal flooding during extreme high tides and storm surges, although these occurrences are relatively rare in San Francisco compared to areas that are prone to hurricanes and major coastal storms.

The Federal Emergency Management Agency (FEMA) issued final flood insurance rate maps (FIRMs) as part of the National Flood Insurance Program (NFIP) for city on September 23, 2020. This is the first time FEMA has mapped flood risks for San Francisco. FIRMs were later adopted by the board of supervisors through the Floodplain Management and Flood Insurance Requirements Ordinance (ordinance no 226-20), with an effective date of

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- ²⁴⁶ All groundwater naturally contains total dissolved solids as a result of the weathering and dissolution of minerals in the sediments. Nutrients, such as nitrate, can be naturally present at low concentrations in groundwater, while high and moderate concentrations generally occur as a result of human activities, such as applying fertilizer. Hexavalent chromium also occurs naturally in groundwater at the Presidio of San Francisco.
- ²⁴⁷ Parsons, M.C., Kulongoski, J.T., and Belitz, Kenneth, 2013, Groundwater Quality in the San Francisco Bay Groundwater Basins, California: U.S. Geological Survey Fact Sheet 2012-3111.
- ²⁴⁸ State Water Resources Control Board Division of Water Quality GAMA Program. 2017. Groundwater Information Sheet Hexavalent Chromium. November.
- ²⁴⁹ Personal communication with San Francisco Public Utilities Commission, December 14, 2021.
- ²⁵⁰ California Department of Water Resources, *California's Groundwater Bulletin 118, San Francisco Hydrologic Region, Marina Groundwater Basin*, February 27, 2004.
- ²⁵¹ California Department of Water Resources, *California's Groundwater Bulletin 118, San Francisco Hydrologic Region, Downtown San Francisco Groundwater Basin*, February 27, 2004.
- ²⁵² California Department of Water Resources, *California's Groundwater Bulletin 118, San Francisco Hydrologic Region, Lobos Groundwater Basin*, February 27, 2004.
- ²⁵³ California Department of Water Resources, *California's Groundwater Bulletin 118, Update 2003, San Francisco Bay Hydrologic Region*, https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/Statewide-Reports/Bulletin_118_Update_2003.pdf, accessed: August 2, 2021.
- ²⁵⁴ California Department of Water Resources, *California's Groundwater Bulletin 118, San Francisco Hydrologic Region, Westside Groundwater Basin*, January 1, 2006.

March 23, 2021.²⁵⁵ The FIRMS identify existing coastal flood hazards only. Flood hazards related to future sea level rise and stormwater runoff are discussed below.

Using detailed studies of coastal flood hazards associated with San Francisco Bay and the Pacific Ocean, the final FIRMs designate areas of the city, including portions of the waterfront, Mission Bay, Islais Creek, Bayview Hunters Point, Hunters Point Shipyard, Candlestick Point, Treasure Island, San Francisco International Airport, and Ocean Beach as coastal flood hazard areas. These "special flood hazard areas" are subject to inundation during a flood with a 1 percent chance of occurrence in any given year. The zones begin with the letter "A" or "V" on the FIRMs (Zone D represents an undetermined flood hazard and is not subject to city building code and NFIP regulations). **Figure 4.1-30** shows flood hazard areas within the city based on the FIRMs. In accordance with NFIP requirements, the city has adopted a floodplain management ordinance that requires it to regulate new construction and make substantial improvements or repairs to structures in special flood hazard areas to reduce the risk of flood damage.

Sea Level Rise

The city's sea-level rise vulnerability zone is primarily along coastal areas and low-lying areas near the shoreline in the eastern part of the city.²⁵⁶ The sea-level rise vulnerability zone is 108 inches above today's high tide (mean higher high water). This includes 66 inches of sea-level rise plus 42 inches of tidal and storm surge, representing an upper-range scenario for end of century.

The 2018 *State of California Sea-Level Rise Guidance* provides a science-based methodology for state and local governments to use in analyzing and assessing the risks associated with sea-level rise and incorporating sea-level rise into planning, permitting, and investment decisions. Projections regarding the extent of sea-level rise go from the low-risk range up to the extreme "high-greenhouse gas emissions" scenario. The document provides projections regarding the rates of sea-level rise in the city for the likely range (66 percent probability sea level rise) and the 1-in-200 chance (0.5 percent sea level rise). The 66 percent probability of sea-level rise range from 0.5 feet to 1.1 feet between 2030 and 2050). **Figures 4.1-32** through **4.1-35**, pp. 4.1-182 through 4.1-185, show the areas of inundation for projected sea level rise under the likely range and 1-in-200 chance scenarios in 2050 and 2100 under high emissions. The Ocean Protection Council's sea-level rise guidance identifies steps that will provide a decision framework for evaluating the consequences and risk tolerances of various planning decisions and, if necessary, developing adaptation pathways to increase resiliency to sea-level rise. If projections are exceeded, contingency plans are included.

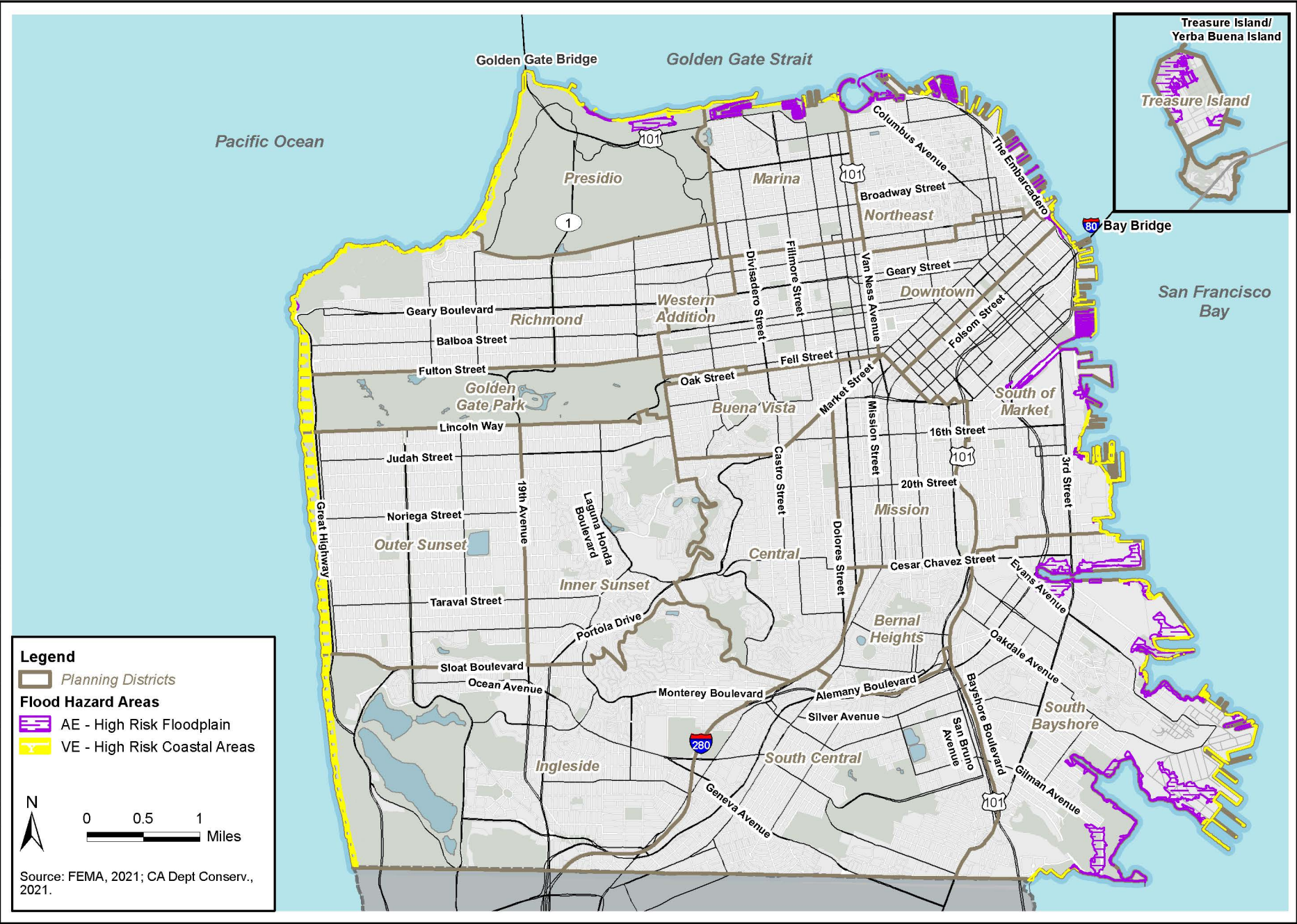
Stormwater Flooding

In addition to coastal flood hazard areas, some low-lying areas primarily in the eastern portion of the city within and adjacent to historical creeks and waterbodies including SOMA and the Outer Mission neighborhoods and smaller areas throughout the city are subject to flooding from stormwater runoff during heavy rainfall. **Figure 4.1-31**, p. 4.1-181, is a 100-year storm flood risk map developed by the SFPUC to show areas of San Francisco where

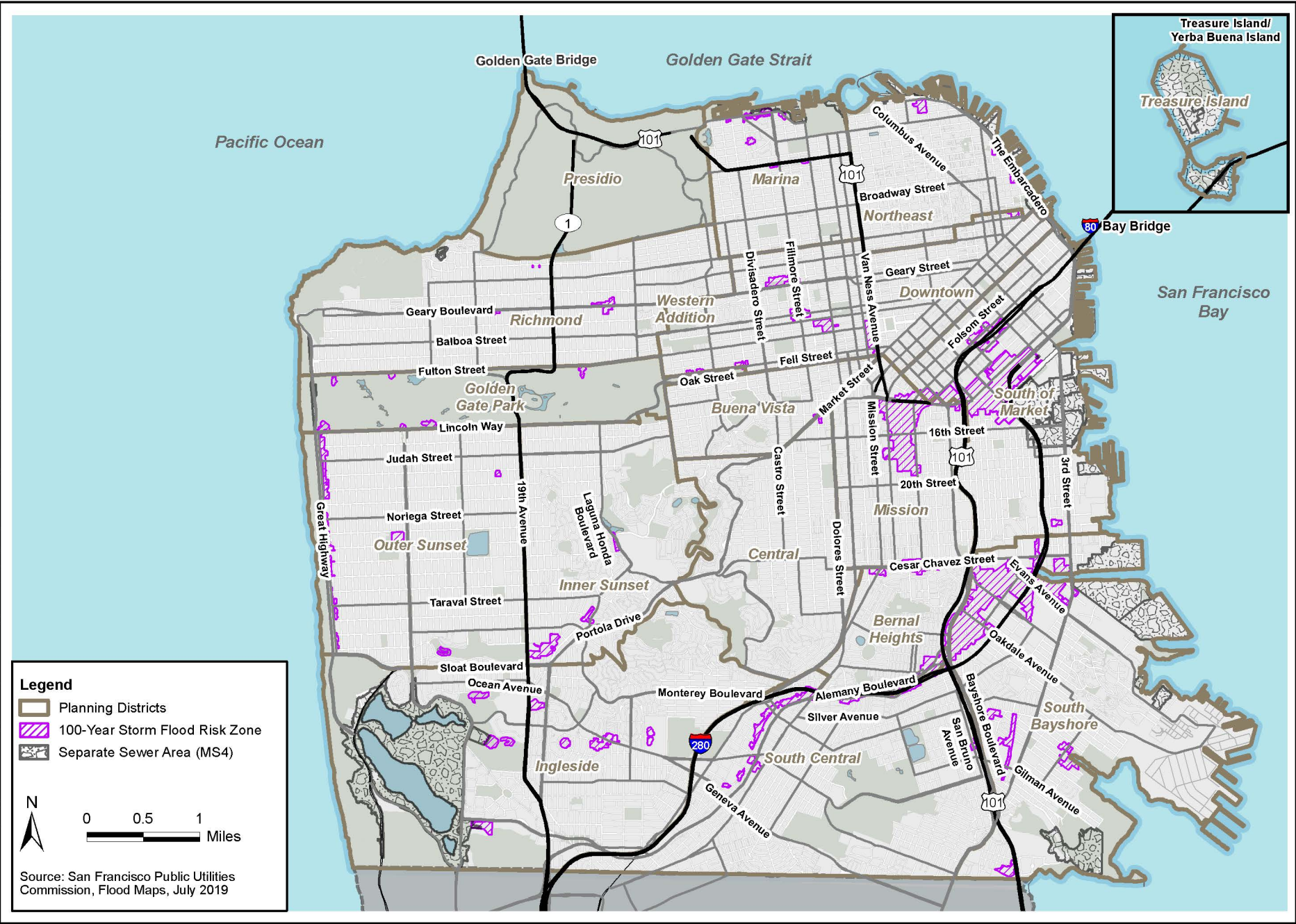
²⁵⁵ San Francisco Building Code Section 1612 ASCE 7, Chapter 5 ASCE 24 FEMA Flood Insurance Rate Map (FIRM): effective date March 23, 2021 Ordinance No. 226-20: Ordinance Updating Floodplain Management and Flood Insurance Requirements. The FIRMs are available for viewing at <https://msc.fema.gov/portal/home>.

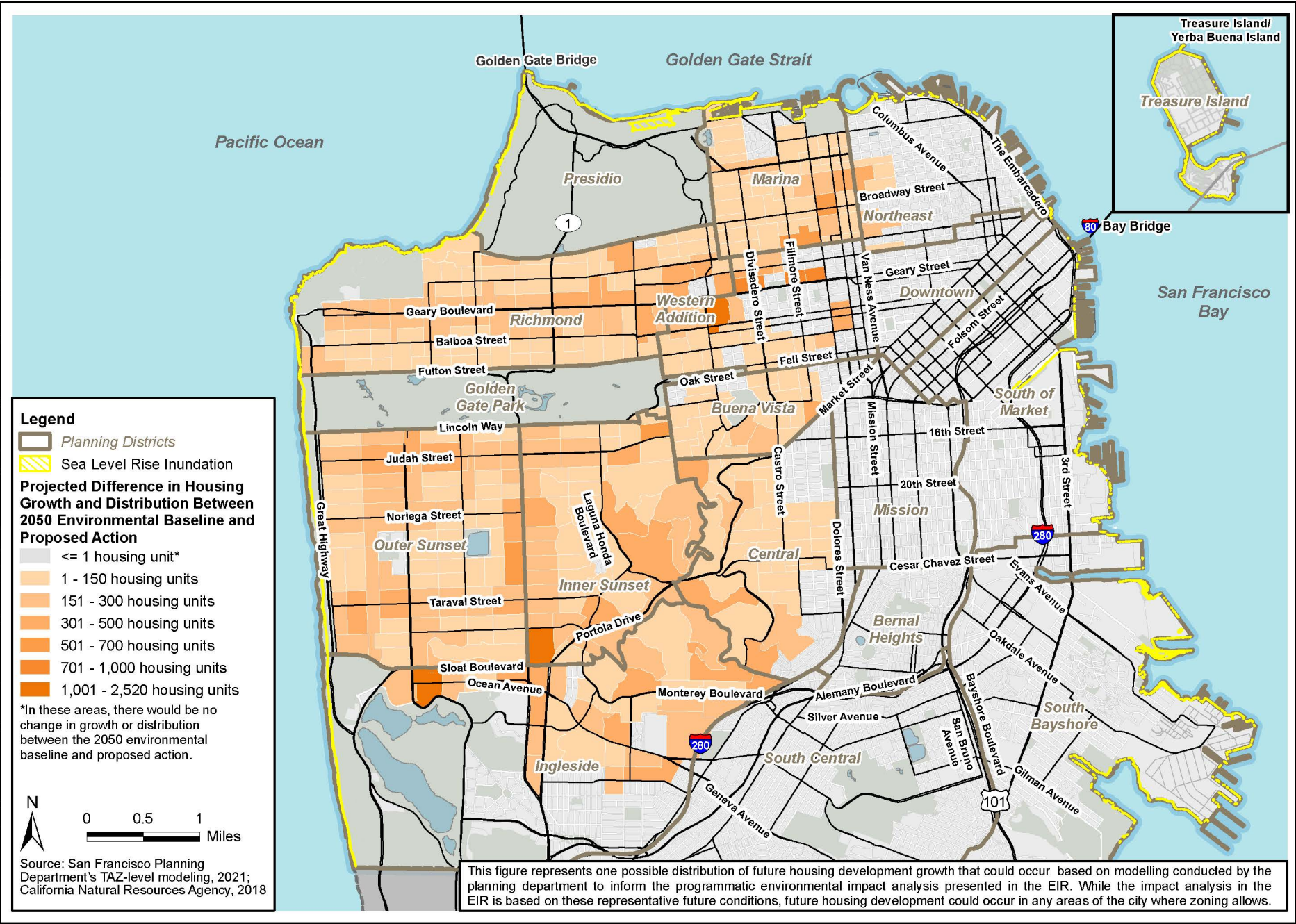
²⁵⁶ San Francisco Planning Department, *Sea-Level Rise Adaptation*, <https://sfplanning.org/sea-level-rise-action-plan#vulnerability-zone>, accessed February 2, 2021.

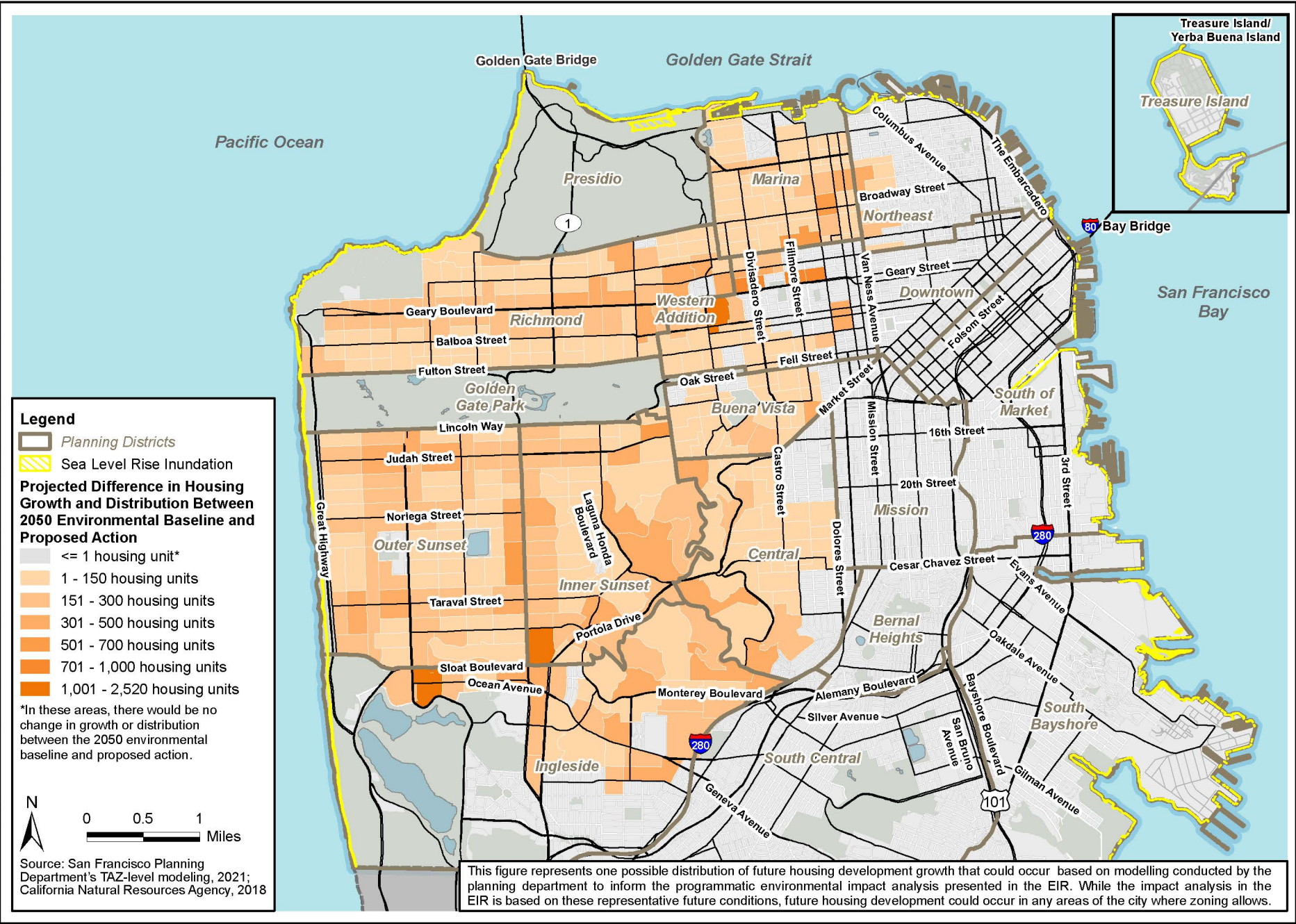
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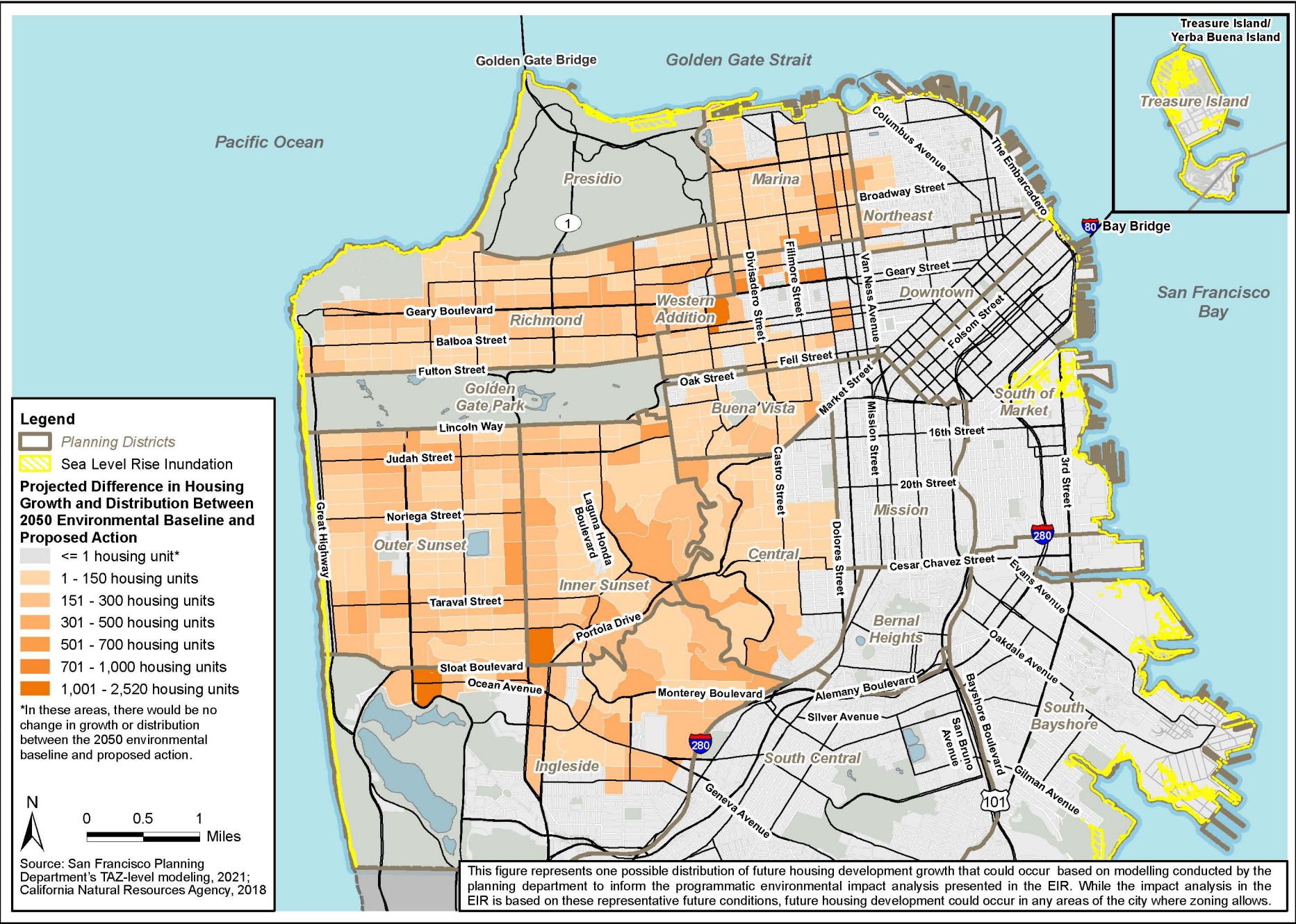


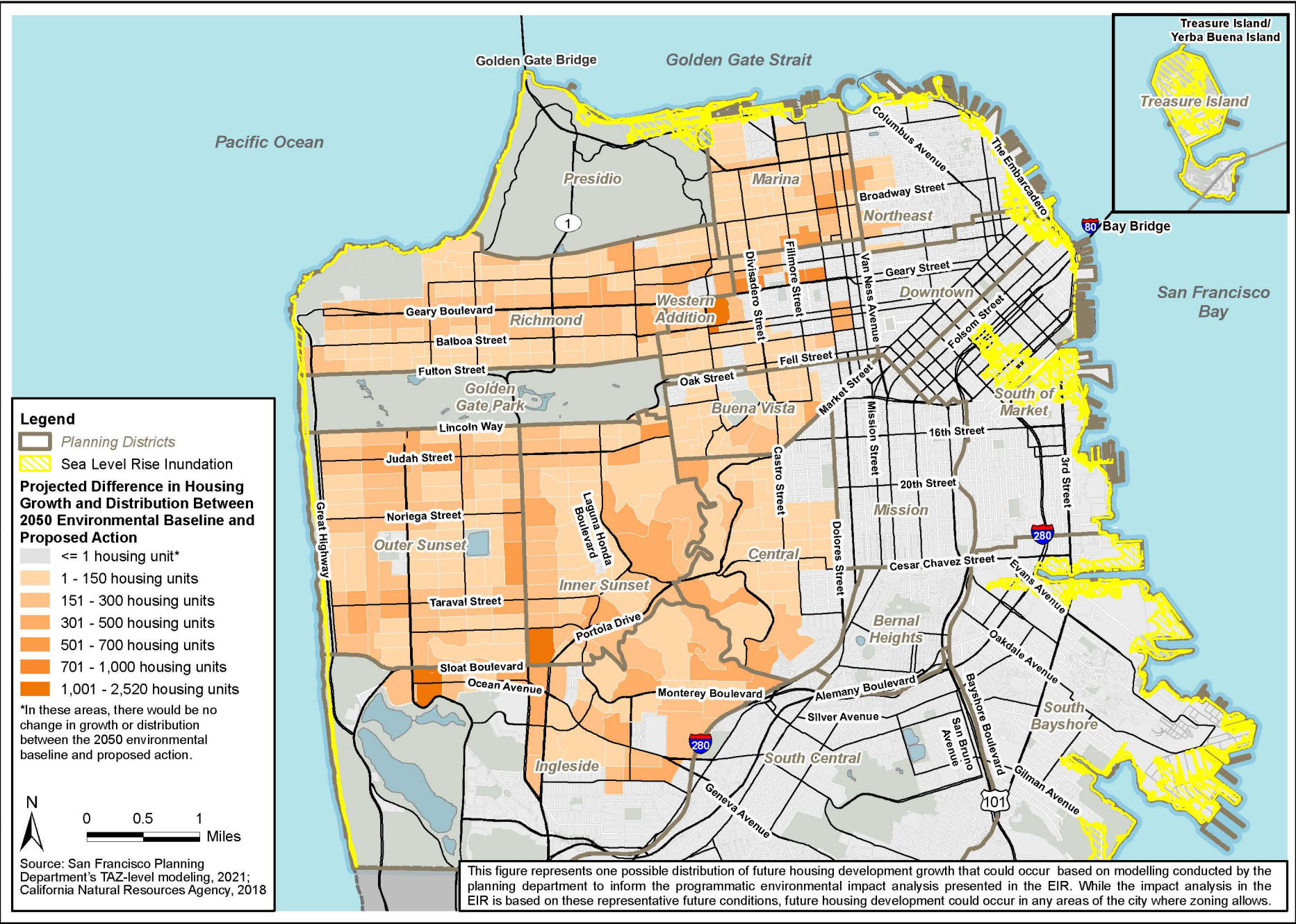
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significant flooding from stormwater runoff is highly likely to occur during a 100-year storm. More information about this map, including a searchable web map, is available at <https://www.sfwater.org/index.aspx?page=1229>.

In most areas, the stormwater flood hazard areas identified by the SFPUC and the coastal flood hazard areas identified by FEMA are separate. There are a few areas, however, near the shoreline where the SFPUC's flood risk zones overlap with the FEMA-designated special flood hazard areas.

REGULATORY FRAMEWORK

Federal

Clean Water Act

The Clean Water Act (1972) sets water quality standards for contaminants in surface waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The U.S. EPA has delegated responsibility for implementation of portions of the Clean Water Act, including water quality control planning and programs in California, to the State Water Resources Control Board (state water board) and the nine regional boards. Water quality standards applicable to the project are listed in the Water Quality Control Plan for the San Francisco Bay Basin (basin plan), discussed further below under *State* regulations.

Section 303(d) – Total Maximum Daily Loads

In accordance with Section 303(d) of the Clean Water Act, states must present the U.S. EPA with a list of “impaired water bodies,” defined as those water bodies that do not meet water quality standards. The Clean Water Act requires the development of total maximum daily loads²⁵⁷ to improve water quality in the impaired water bodies. Implementation of this program in the project area is conducted by the regional boards and discussed below under *State, National Pollutant Discharge Elimination System – Waste Discharge Regulations*, below.

Section 402 – NPDES Permits

Section 402 of the Clean Water Act prohibits discharges from point sources, including wastewater and stormwater outfalls, to surface waters unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The U.S. EPA retains authority to administer the NPDES permit program in federal territorial waters, and the agency has delegated authority to California to administer the NPDES permit program. NPDES permits authorizing discharges to state waters may, therefore, be issued by the state water board and the nine regional boards. See the discussion under *State, National Pollutant Discharge Elimination System – Waste Discharge Regulations*

Federal Combined Sewer Overflow Control Policy

In 1994, the U.S. EPA adopted the Combined Sewer Overflow Control Policy, which became part of the Clean Water Act in December 2000. This policy establishes a consistent national approach for controlling discharges from

²⁵⁷ A total maximum daily load is a regulatory term in the Clean Water Act that describes a plan for restoring impaired waters. The total maximum daily load identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

combined sewers to the nation's waters. Using the NPDES permit program, a permittee (e.g., the city) is required to implement nine controls, which constitute the technology-based requirements of the Clean Water Act. The controls can reduce the frequency of combined sewer discharges and their effects on receiving water quality.

1. Conduct proper operation and regular maintenance programs for the combined sewer system and combined sewer discharge structures
2. Maximize the use of the collection system for storage
3. Review and modify pretreatment programs to minimize the effect of non-domestic discharges on the collection system
4. Maximize flows to the Southeast Plant, North Point Facility, and Oceanside Plant for treatment
5. Prohibit combined sewer discharges during dry weather
6. Control solids and floatable materials in combined sewer discharges
7. Develop and implement a pollution prevention program that focuses on reducing the effect of combined sewer discharges on receiving waters
8. Notify the public of combined sewer discharges
9. Monitor to characterize combined sewer discharge effects and the efficacy of combined sewer discharge controls

The city is currently implementing and operating its system in accordance with the controls, as required by the Combined Sewer Overflow Control Policy, and is implementing its long-term control plan to optimize operations at its combined sewer collection and treatment system and maximize pollutant removal during wet weather. The city's NPDES permits for the wastewater treatment facilities require the city to continue operating its combined sewer system in accordance with the nine minimum controls identified in the Combined Sewer Overflow Control Policy and its long-term control plan.

Consistent with the Combined Sewer Overflow Control Policy and the long-term control plan, the city's system is designed to capture and treat combined wastewater and stormwater flow collected in the combined sewer system during precipitation events. There are 36 combined sewer discharge outfall locations in the bayside and coastal shoreline areas of the city as well. Combined wastewater and stormwater are directed first to the three treatment plants for treatment. Flows in excess of the capacity of the facilities receive treatment that is equivalent to primary treatment prior to discharge to San Francisco Bay and the Pacific Ocean. The long-term control plan specifies operational parameters that must be met in each drainage basin before a combined sewer discharge can occur. These include the following long-term average design goals for combined sewer discharges annually.

- Four combined sewer discharge events along the north shore
- Ten combined sewer discharge events from the central basin

- Eight combined sewer discharge events from the Westside basin (along Ocean shoreline)
- One combined sewer discharge event along the southeast sector

The Combined Sewer Overflow Control Policy allows for this annual average to be exceeded in any particular year as long as the long-term average is maintained at the appropriate level.

State

California Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (division 7 of the California Water Code) provides for the protection of waters within the state for use and enjoyment by the people of California. The Porter-Cologne Act applies to any surface water or groundwater, including saline waters, wetlands, and groundwater, and to both point and nonpoint sources of pollution within the boundaries of the state. The act establishes provisions for a statewide program to control water quality, recognizing that waters within the state are increasingly influenced by inter-basin water development projects and other statewide considerations and that factors such as precipitation, topography, population, recreation, agriculture, industry, and economic development vary regionally within the state. The statewide program for water quality control is, therefore, administered most effectively on a local level, with statewide oversight. Within this framework, the act authorizes the state water board and regional boards to oversee the coordination and control of water quality within California.

San Francisco Bay Water Quality Control Plan

San Francisco Bay waters are under the jurisdiction of the regional board, which established regulatory standards and objectives for water quality in San Francisco Bay in its basin plan. The basin plan identifies existing and potential beneficial uses for surface waters and provides numerical and narrative water quality objectives designed to protect those uses. The preparation and adoption of water quality control plans are required by the California Water Code (section 13240) and supported by the federal Clean Water Act. Changes in surface water standards must be approved by the U.S. EPA.

National Pollutant Discharge Elimination System – Waste Discharge Regulations

The NPDES program requires all facilities that discharge pollutants into waters of the United States to obtain a permit. The permit provides two levels of control, technology-based limits and water-quality-based limits, to control discharge of pollutants to protect water quality. Technology-based limits are based on the ability of dischargers in the same category to treat wastewater, while water-quality-based limits are required if technology-based limits are not sufficient to protect the water body. Water quality-based effluent limitations required to meet water quality criteria in the receiving water are based on criteria specified in the National Toxics Rule, the California Toxics Rule, and the basin plan. NPDES permits must also incorporate total maximum daily load wasteload allocations when they are developed. In California, the state water board and the regional boards implement and enforce the NPDES program. The state water board authorizes waste discharge requirements pursuant to California Water Code article 4, chapter 4, division 7 that serve as NPDES permits described in the

previous section (i.e., Order No. R2-2013-0029 and Order No. R2-2019-0028). Although other NPDES permits exist in the city, only those relevant to residential sites or the proposed action are discussed.

The city maintains two NPDES permits that authorize discharges from the city's combined sewer system:

- **Southeast Plant, North Point Facility, Bayside Wet-Weather facilities, and Wastewater Collection System, CA0037664, Order R2-2013-0029 (Southeast Plant NPDES Permit).** This permit authorizes discharges from the Southeast Plant outfalls, the North Point Facility outfalls, and the 29 bayside combined sewer discharge outfalls.
- **Oceanside Plant, Wastewater Collection System, and Westside Recycled Water Project, NPDES No. CA0037681, Order No. R2-2019-0028 (Oceanside Plant NPDES Permit).** This permit authorizes discharges from the Oceanside Plant deep water outfall and the seven combined sewer discharge outfalls.

State Water Board Order No. 2009-09-DWQ - Construction General Stormwater Permit

Stormwater discharges associated with construction activities that disturb more than 1 acre of land and that could discharge to surface waters directly or via a separate stormwater system are subject to the state water board General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order no. 2009-0009-DWQ (this is also referred to as the Construction General Stormwater Permit). Stormwater discharges associated with construction activities that discharge to the combined sewer system are not subject to the construction general stormwater permit. Construction activities subject to this permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation. Under the Construction General Stormwater Permit, construction projects are characterized by the level of risk to water quality, which is determined using a combination of the sediment risk of the project and the receiving water quality risk. Because most future development consistent with the housing element update would be on sites that are smaller than 1 acre and in areas of the city that are served by the combined sewer system where the Construction General Permit does not apply, only a small portion of the construction activities related to future development consistent with the housing element update would be subject to the requirements of the Construction General Permit.

Regional Board Order No. R2-2018-0026 - Groundwater General Permit

The regional board has issued Order Number R2-2018-0026 (referred to as the Groundwater General Permit), which is a general permit for the discharge or reuse of extracted brackish groundwater, concentrated brine resulting from the treatment of brackish groundwater,²⁵⁸ and extracted groundwater from structural dewatering that requires treatment. The permit specifies effluent limitations for the discharges, receiving water limitations, and discharge prohibitions (including flow rate and restrictions on scouring and erosion). Monitoring requirements for demonstrating permit compliance are also specified. To obtain authorization to discharge under this permit, the discharger must submit a Notice of Intent describing the proposed discharge and treatment system and the regional board must issue an Authorization to Discharge once it is determined that the discharger is eligible to discharge under the permit. Under this order, extracted groundwater may be reused for

²⁵⁸ Brackish groundwater is groundwater with a high salinity or total dissolved solids content.

purposes such as dust control or soil compaction on construction sites, provided that reuse complies with the water reclamation specifications of the order. This order does not cover the discharge of groundwater that requires treatment due to contamination from fuels or volatile organic compounds. Such discharges must seek coverage under the Volatile Organic Compound and Fuel General Permit, which is described below.

State Water Board Order No. 2013-001-DWQ - Phase II Small MS4 General Stormwater Permit (

On February 5, 2013, the state water board adopted the Waste Discharge Requirements for Stormwater Discharges from Phase II Small MS4s, order no. 2013-001-DWQ (Phase II Small MS4 General Stormwater Permit). Small portions of the city—including parts of Ocean Beach, the Marina, the Embarcadero, the Mission Bay area, Islais Creek, Candlestick Point, Treasure and Yerba Buena islands and the area surrounding Lake Merced—are served by MS4s. Areas that drain to separate stormwater collection systems in San Francisco are subject to this permit. Both the SFPUC and the port have coverage under this permit. The Phase II Small MS4 General Permit identifies specific BMPs and management measures to be addressed and requires permittees to submit a guidance document to the state water board documenting their strategies for complying with permit requirements to ensure that pollutants in stormwater are controlled to the maximum extent practicable. The required program includes specific elements related to program management, education and outreach on stormwater impacts, public involvement/participation, illicit discharge detection and elimination, construction site stormwater runoff and control, pollution prevention/good housekeeping for permittee operations, postconstruction stormwater management for new development and redevelopment, water quality monitoring requirements, program effectiveness assessment, and annual reporting.

Local

San Francisco Public Works Code Article 4.2 – Sewer System Management

Stormwater Management

Development projects that discharge stormwater to either the combined sewer system or a separate stormwater system must comply with San Francisco Public Works Code Article 4.2, Section 147. The SFPUC and the port have developed San Francisco Stormwater Management Requirements and Design Guidelines in accordance with the requirements of the Small MS4 General Stormwater Permit and Article 4.2, Section 147.²⁵⁹

The Stormwater Management Requirements and Design Guidelines describe the regulatory context for a post-construction stormwater control program and provide tools to help project developers achieve compliance with stormwater management requirements, including but not limited to:

- A set of stormwater BMP fact sheets
- A vegetation palette to assist in bioretention BMP (appropriate plant selection)

²⁵⁹ San Francisco Public Utilities Commission and Port of San Francisco, *San Francisco Stormwater Management Requirements and Design Guidelines*, May 2016.

- Sizing calculators to determine the required size of each BMP
- Illustrative examples of green infrastructure

In accordance with the Stormwater Management Requirements and Design Guidelines, developers of projects that create and/or replace 5,000 square feet or more of impervious surface and discharge to the combined sewer system must implement BMPs to manage the flow rate and volume of stormwater going into the combined sewer system by achieving Leadership in Energy and Environmental Design (LEED®) Sustainable Sites Credit 6.1 (Stormwater Design: Quantity Control) certification, or the equivalent. For covered projects that include more than 50 percent existing impervious surfaces, the stormwater management approach must reduce the existing stormwater runoff flow rate and volume by 25 percent for a two-year 24-hour design storm.

The Stormwater Management Requirements and Design Guidelines require low-impact development measures to reduce the rate of stormwater runoff and to reduce and delay the volumes of discharge entering the combined sewer system, thereby reducing the frequency of combined sewer overflows, minimizing flooding effects, and protecting water quality. Examples of BMPs that may be implemented include rainwater harvesting, rain gardens, green roofs, and permeable paving.

Developers of projects that discharge to a separate stormwater system must also implement BMPs to reduce the flow rate and volume and improve the quality of stormwater going into the separate stormwater system. In areas served by separate stormwater systems, the Stormwater Management Requirements and Design Guidelines specify different performance requirements according to the following project size thresholds:

- Small project: 2,500 to 5,000 square feet of impervious surface created and/or replaced
- Large project: 5,000 square feet or more of impervious surface created and/or replaced

Small projects that discharge to a separate stormwater system must implement one or more site design measure(s) (e.g., tree planting and preservation, permeable pavement, green roofs, vegetated swales, rainwater harvesting, etc.). Large projects must implement source controls and BMPs to meet performance requirements and must manage runoff from storms that produce a rainfall depth of 0.75 inch in 24 hours and a rainfall intensity of approximately 0.24 inch per hour (referred to as the 90th percentile, 24-hour storm). The Stormwater Management Requirements and Design Guidelines also require developers to use certain preferred BMPs to the maximum extent feasible before considering use of remaining BMPs. The preferred BMP hierarchy prioritizes infiltration-based BMPs, rainwater harvesting, and vegetated roofs followed by lined bioretention (e.g., lined bioretention materials with an underdrain, commonly known as a flow-through planter). If none of these BMPs are feasible on site, projects may be able to incorporate high-rate filtration BMPs (e.g., tree-box filters and media filters) into their site design pending approval by the SFPUC. The SFPUC may inspect stormwater BMPs once they are constructed, and the project applicant must correct any issues noted by the inspector.

Construction Site Runoff Control

In addition to the state stormwater regulations described above, discharges of construction-related stormwater runoff are also subject to the construction site runoff requirements of San Francisco Public Works Code Article 4.2, Section 146. In accordance with these requirements, developers must obtain a construction site runoff

control permit from the SFPUC for any construction activity that disturbs 5,000 square feet or more of ground surface. Projects that involve any land-disturbing activities, regardless of size, must also implement and maintain BMPs to minimize surface runoff, erosion, and sedimentation and to prevent illicit discharge into the combined or separate sewer systems. Regulated land-disturbing activities include but are not limited to building demolition, clearing, grading, grubbing, filling, stockpiling, excavating, and transporting of land.

The construction site runoff permit specifically requires easements for drainage facilities; provision of adequate dust controls in conformance with applicable air quality laws and regulations; and improvement of any existing grading, ground surface, or site drainage to meet the requirements of Article 4.2. The application for the permit must also include an erosion and sediment control plan. A building permit cannot be issued until the SFPUC issues a construction site runoff control permit. Under the construction site runoff control permit, the project sponsor would be required to conduct daily inspections and maintenance of all erosion and sediment controls and must provide inspection and maintenance information to the SFPUC. The SFPUC may also conduct periodic inspections of the construction site to ensure compliance with the plan. The project sponsor would be required to notify the SFPUC at least two days prior to the start of construction, completed installation of erosion and sediment control measures, completion of final grading, and completion of project construction. At the SFPUC's discretion, sampling, metering, and monitoring also may be required.

San Francisco Public Works Code Article 22 – Reclaimed Water Use

The city's Recycled Water Ordinance, which added Article 22 to the San Francisco Public Works Code, requires property owners located within the designated recycled water use areas to install recycled water systems in certain development projects. The recycled water use area comprises the majority of the city's bayside waterfront area and some inland areas, as well as Treasure Island. The goal of the ordinance is to maximize the use of recycled water. Buildings and facilities located within the designated recycled water use areas are required to use recycled water for all uses authorized by the state once a source of recycled water becomes available. Commonly approved uses of recycled water include irrigation, cooling, and/or toilet and urinal flushing. These systems must meet city plumbing and health codes, which include specifications for pipe type, pipe separation, backflow prevention assemblies, water meters, and signage. The following types of developments that are located within the designated recycled water use area must comply with this ordinance:

- New construction or major alterations to a building totaling 40,000 square feet or more
- All subdivisions
- New and existing irrigated areas of 10,000 square feet or more

In a mixed-use residential building where a recycled water system is installed, any restaurant or other retail food-handling establishment must be supplied by a separate potable water system to ensure public health and safety. Future development consistent with the proposed action and within the designated recycled water use areas would be subject to this ordinance.

The SFPUC is currently planning the Eastside Recycled Water project that will ultimately provide an estimated 2 mgd of recycled water on the bayside of San Francisco. However, this is not expected to be completed until 2029.

San Francisco Health Code Article 12C – Alternative Water Sources for Non-potable Applications

In September 2012, the city adopted the Onsite Water Reuse for Commercial, Multi-family, and Mixed-Use Development Ordinance. Commonly known as the Non-Potable Water Ordinance, the city added Article 12C to the San Francisco Health Code, allowing for the collection, treatment, and use of alternate water sources for non-potable applications. The required alternate water sources and required non-potable uses are based on development project type. Amended in 2021, San Francisco Health Code Article 12C of the requires the following:

- New development projects that apply for a site permit after January 1, 2022, of 100,000 gross square feet or more are required to install and operate an onsite water reuse system. The required alternate water sources and required non-potable uses are based on development project type.
 - Commercial buildings must meet toilet and urinal flushing and drain trap priming demands through the collection, treatment, and use of available blackwater and condensate.
 - Residential and mixed-use buildings must meet toilet and urinal flushing, irrigation, clothes washing, and drain trap priming demands through the collection, treatment, and use of available graywater and condensate.
- Although projects less than 100,000 gross square feet are not required to install and operate onsite water reuse systems, projects between 40,000 and 100,000 gross square feet are required to submit water budget calculations assessing the supply available from alternate water sources and the demand from non-potable uses.

San Francisco Health Code Article 12B – Soil Boring and Well Regulations

Future development projects consistent with the housing element update could require groundwater dewatering during project construction. In accordance with San Francisco Health Code Article 12B, Soil Boring and Well Regulations, the health department must permit any groundwater well or soil boring. The well must also be constructed in accordance with Article 12B of the health code in addition to water well standards set by the State of California. The well may not be constructed until a well construction permit is issued by the health department. Article 12B prohibits the construction, modification, operation, or maintenance of a well or soil boring that presents a substantial risk of groundwater contamination due to the current or past presence of pollution from any source, even if the well or soil boring may be properly constructed, operated, or maintained.

San Francisco Health Code Article 6 – Garbage and Refuse

San Francisco Health Code Article 6, Garbage and Refuse, requires that properties have appropriate containers placed in appropriate locations for the collection of refuse. In accordance with this article, the refuse containers must be constructed with tight-fitting lids or sealed enclosures, and the contents of the container may not extend above the top of the rim. The property owner must also have adequate refuse collection service. Article 6 also prohibits the dumping of refuse onto any streets, lands, water, wharves, bulkheads, or waterways within San Francisco.

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to hydrology and water quality associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:
 - Result in substantial erosion or siltation on- or offsite
 - Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite
 - Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff or
 - Impede or redirect floodflows
- In flood hazard, tsunami, or seiche zones, risk a release of pollutants due to project inundation
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Approach to Analysis

Detailed discussions of the overall approach to the analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls

and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

The approach for analyzing impacts on hydrology is as follows.

- **Surface Water Hydrology.** Potential impacts on surface water hydrology are analyzed using information on potential changes in impervious surfaces, runoff quantities, and drainage patterns of future development projects consistent with the housing element update.
- **Groundwater Hydrology.** Potential impacts on groundwater supply and recharge are analyzed using information from publicly available, area-specific publications. The potential impacts associated with construction dewatering are evaluated.
- **Surface and Groundwater Quality.** Potential impacts on surface water and groundwater quality are analyzed using information on potential existing sources of pollution generated by activities such as vehicle use and parking, building maintenance, pesticide use, trash, disturbance of sediment, and storage of hazardous material. These indirect impacts are compared to sources of pollution from future development projects consistent with the housing element update. Additional information on hazardous materials is provided in “Hazards and Hazardous Materials” in this section.
- **Flood Hazards.** Potential impacts from flooding are analyzed by using FEMA mapping to determine the existing flood zone and information from the 2018 State of California Sea-Level Rise Guidance to identify areas that may be affected by flooding risk. Additional information on stormwater drainage facilities with potential to affect the project is provided in Section 4.9, Utilities and Service Systems.

CEQA does not require lead agencies to consider how existing hazards or conditions might impact a project’s users or residents, except where the project would significantly exacerbate an existing environmental hazard. Accordingly, hazards resulting from a project that places development in a tsunami inundation zone or an existing or future flood hazard area are not considered impacts under CEQA unless the project would significantly exacerbate the tsunami inundation or flood hazard. Thus, the impact analysis evaluates whether the proposed action would substantially exacerbate an existing or future flood hazard resulting in a substantial risk of loss, injury, or death. The impact would be considered significant if the proposed action would substantially exacerbate flood hazards by increasing the frequency or severity of flooding or causing flooding to occur in an area that would not be subject to flooding without the housing element update.

Impacts and Mitigation Measures

Impact HY-1: The proposed action would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. (*Less than Significant*)

Future development consistent with the proposed action would be located entirely in areas of the city that are served by the combined sewer system. Therefore, all surface runoff from the construction and operation of future development consistent with the proposed action would be collected and treated by the combined sewer system prior to discharge to the bay or ocean. The proposed action would not result in any increased development in the MS4 areas, which as discussed above are not served by the combined sewer system. Therefore, future development consistent with the proposed action would not result in the direct discharge of surface water runoff to any water bodies.

As discussed under “Environmental Setting,” above, all surface runoff from areas served by the combined sewer system is collected and treated at one of the city’s wastewater treatment plants prior to discharge to the bay or ocean. All discharges from the city’s wastewater treatment plants are required to comply with the water quality standards and waste discharge requirements specified in the city’s NPDES permits for these facilities. Therefore, surface runoff related to future development consistent with the proposed action (e.g., stormwater and water from construction dust control) would not violate any water quality standards or waste discharge requirements or otherwise degrade surface water quality.

In addition, future development consistent with the proposed action would be required to comply with the regulatory requirements described under “Regulatory Framework,” above, as applicable. For example, all projects that would disturb 5,000 square feet or more would be subject to the city’s Construction Site Runoff Ordinance, which requires implementation of erosion control BMPs and other measures to reduce runoff of sediment and other pollutants from construction sites into the combined sewer system. Pursuant to the city’s Stormwater Management Ordinance, development projects that would create or replace 5,000 square feet or more of impervious surface coverage would be required to implement stormwater controls, including low impact design and green infrastructure, to treat stormwater on site and reduce the volume of stormwater runoff from development sites into the combined sewer system. Compliance with the Construction Site Runoff Ordinance, Stormwater Management Ordinance, and other regulations as applicable would further ensure that future development consistent with the proposed action would not violate any water quality standards or waste discharge requirements or otherwise degrade surface water quality.

Construction Site Dewatering

Future development consistent with the housing element update that requires excavation on sites with shallow groundwater may require dewatering during construction. Although shallow groundwater occurs primarily in the eastern portion of the city, shallow groundwater is also present in some areas on the west side of the city along the coast (see **Figure 4.1-29**, p. 4.1-176). Because all future development consistent with the housing element update would occur in the areas of the city that are served by the combined sewer system, all construction site dewatering discharges would be directed to the combined system and would be subject to the regulatory requirements described below.

Wells used for groundwater dewatering during construction are required to comply with the city's Soil Boring and Well Regulation, adopted as article 12B of the San Francisco Health Code. Article 12B of the San Francisco Health Code prohibits the construction, modification, operation, or maintenance of a well or soil boring that presents a substantial risk of groundwater contamination due to the current or past presence of pollution from any source, even if the well or soil boring may be properly constructed, operated or maintained.

Water discharges to the city's combined sewer system during construction are subject to the requirements of article 4.1 of the San Francisco Public Works Code (supplemented by San Francisco Public Works Order no. 158170). Provisions of article 4.1, referred to as the Sewer Use Ordinance, specify pollutant limitations for the discharge of wastewater into the city's sewer collection system on a temporary basis. Such temporary, or "batch," discharges may result from dewatering construction sites, drilling wells to investigate or mitigate a contaminated site, using water for cleaning or hydrostatic testing of pipes or tanks, or conducting any other activity that generates wastewater, other than routine commercial or industrial processes. If the dewatered water is discharged to the city's combined sewer system, a batch wastewater discharges permit would need to be obtained. Article 4.1 requires the project sponsor to develop and implement a pollution prevention program, and it specifies discharge limitations for specific chemical constituents, as well as general conditions for the discharge.

Once collected in the combined sewer system, all construction site dewatering and other discharges are treated at one of the city's wastewater treatment plants in compliance with the water quality standards and waste discharge requirements specified in the NPDES permits for these facilities prior to discharge to the bay or ocean.

Conclusion

Future development consistent with the housing element update would be served by the city's combined sewer system. Prior to discharge to the bay or ocean, all wastewater collected in the combined system is treated in accordance with the water quality standards and waste discharge requirements specified in the NPDES permits for the city's wastewater treatment plants. In addition, stormwater runoff, construction site runoff, and construction dewatering discharges associated with future development consistent with the housing element update would be subject to water quality regulations designed to reduce the volume and pollutant loads of stormwater and construction site wastewater that enters the city's combined system. Therefore, the proposed action would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. The impact would be *less than significant*, and no mitigation measures are necessary.

Impact HY-2: The proposed action would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin. (*Less than Significant*)

Because of the underlying geological formations, groundwater depths range from 5 feet near the coast and San Francisco Bay to a depth of 300 feet within the Westside groundwater basin. In addition, the potential exists for areas of shallow or perched groundwater from rainwater infiltration and/or landscaping irrigation, or other near-surface sources, to be present throughout the area. Although groundwater is present in the city, no groundwater

management plan is required because there are no medium- or high-priority groundwater basins within the city, as designated by the California Department of Water Resources.

As discussed above, between approximately 0.01 to 0.49 percent of the city's potable water supply is groundwater from the Westside Basin. Groundwater from the Westside Basin is also used for irrigation and other non-potable uses at Golden Gate Park, the San Francisco Zoo, Lake Merced Golf Courses, and nearby cemeteries. In addition, 70 to 80 percent of the Presidio's potable water needs are met by Lobos Creek, which is spring fed and relies on groundwater recharge.

Construction dewatering in areas with shallow groundwater may be required during excavation activities associated with future construction. Dewatering during construction would not result in a loss of water that would substantially decrease groundwater supplies because dewatering activities would be temporary and short-term in duration. Future development consistent with the housing element update would not require new groundwater wells for potable or non-potable uses. It would rely on the SFPUC's water supply system for both potable and non-potable (e.g., landscaping irrigation) uses.

Natural groundwater recharge in the Marina, Downtown, Lobos, Westside, and Islais Valley groundwater basins occurs primarily from rainfall infiltration, landscape irrigation, and pipe leakage. New impervious areas can reduce infiltration capacities so that more precipitation runs off into storm sewers or nearby surface waters instead of infiltrating and recharging the underlying aquifer.

The city is generally built out and primarily consists of impervious surfaces; therefore, future development under the 2050 environmental baseline would be similar to future development consistent with the housing element update and would remain mostly impervious, consistent with 2021 conditions. In accordance with the Stormwater Management Requirements and Design Guidelines, future development consistent with the housing element update that would create or replace 5,000 square feet or more of impervious cover would be required to provide onsite treatment and/or retention of stormwater, which in many cases would reduce existing impervious coverage and increase groundwater recharge. Conversely, as discussed below under Impact HYD-3, future development consistent with the proposed action could also increase the amount of impervious surface coverage – particularly in cases where small single-family homes are replaced with larger multi-family buildings. Such projects could reduce groundwater recharge. Increased growth in low-density residential districts could increase impervious cover by increasing development on sites that may currently include pervious surfaces. **Figure 4.1-27**, p. 4.1-174, shows existing impervious cover within the areas identified for growth under the proposed action.

Although the proposed action could lead to an incremental increase in impervious surface coverage in the areas of the city that could affect groundwater recharge in the Westside Groundwater Basin and the Presidio, the changes in impervious surface coverage in these areas would be negligible relative to the total groundwater recharge areas of these groundwater basins. Therefore, future development consistent with the housing element update would not interfere substantially with groundwater recharge such that the proposed action would impede sustainable groundwater management for reasons discussed below.

For the reasons stated above, future development consistent with the housing element update would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin. Therefore, impacts of the proposed action on groundwater supplies and recharge would be *less than significant*.

Impact HY-3: The proposed action would not substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would result in substantial erosion, siltation, or flooding on- or offsite, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite, or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (*Less than Significant*)

Future development consistent with the housing element update would occur in a generally built-out setting and would not alter the course of streams or rivers. Therefore, the housing element update would not alter the course of a stream or river or substantially alter the existing drainage pattern of the project site or area.

Future development consistent with the housing element update would occur primarily on infill sites that are already covered entirely or partially with impervious surfaces, including existing buildings and pavement. However, future development consistent with the housing element update would include the replacement of some existing single-family homes with multifamily residential and mixed-use development. The replacement of some single-family homes with larger multifamily and mixed-used buildings could result in an incremental increase in impervious surface coverage. This could occur on lots where existing landscaped areas are reduced or eliminated. In addition, a small portion of the future development anticipated consistent with the proposed action would be located on existing undeveloped lots with little or no impervious coverage.

New impervious surface coverage would be partially offset by the reduction in existing impervious surface coverage pursuant to the city's stormwater management ordinance, which requires managing post-construction stormwater runoff and provides guidance on how to incorporate green infrastructure into site designs. The ordinance applies to all projects that create and/or replace 5,000 square feet or more of impervious surface in areas of the city served by the city's combined stormwater and sewer system. The SFPUC is also responsible for overseeing implementation of the city's Construction Site Runoff Control Program to ensure that all construction sites implement BMPs to control construction site runoff. Construction activity within the city that disturbs 5,000 square feet or more of ground surface must also submit an erosion and sediment control plan and an application for a construction site runoff control permit prior to commencing construction-related activities. Smaller projects that would involve the redevelopment of 2,500 square feet or less are not anticipated to generate substantial amounts of runoff since the redevelopment would likely occur in a location with existing impervious surface. However, it is not possible to determine at this time the degree to which the requirements of the stormwater management ordinance would offset potential increased impervious surface coverage that could result from increased density in well-resourced areas. Therefore, to provide a reasonable worst-case analysis of the potential impacts of the proposed action, this analysis assumes that the future implementation of

the proposed action would result in an increase of up to five percent in impervious surface coverage compared to the 2050 environmental baseline.²⁶⁰

The SFPUC estimates that increased stormwater runoff associated with a five percent increase in impervious surface coverage in city would not exceed the capacity of the city's stormwater collection and conveyance systems.²⁶¹ The SFPUC also determined that the increased stormwater volumes would not result in an increase in the average *number* of combined sewer discharges from any of the city's wastewater treatment plants but could result in an increase in the average *volume* of combined sewer discharges at the Central, Oceanside, and North Shore subbasins.²⁶² However, this increase in the volume of combined sewer discharges would not violate the waste discharge requirements established in the city's NPDES permits for these facilities because the parameters of the NPDES permits are not volume-based. As long as the average number of combined sewer discharges remains within regulatory standards and the system is being operated and maintained in accordance with the nine minimum controls and the long-term control plan, the city is considered in compliance with the NPDES permit requirement, regardless of the volume of discharges.

Future development consistent with the housing element update would occur in a generally built-out setting and would not result in substantial flooding onsite or offsite or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. The SFPUC has developed a 100-Year Storm Flood Risk Map that shows areas of San Francisco where significant flooding from storm runoff is likely to occur during a 100-year storm. Storm flood risks primarily occur in the eastern portion of the city including low lying areas within and adjacent to historical creeks and waterbodies primarily in the eastern portion of the city including SOMA and the Outer Mission neighborhoods, as shown in **Figures 4.1-30 and 4.1-31**, p. 4.1-180 and 4.1-181. Future development consistent with the housing element update would be directed to areas of the city that are not prone to flooding from stormwater, such as the western portion of the city, and would not result in increased stormwater runoff due to increased impervious surface coverage that could contribute to flooding in flood-prone areas of the city, including SOMA and the eastern portion of the city. As discussed above, the SFPUC has determined that the increased stormwater runoff that could result from future development consistent with the housing element update would not exceed the city's stormwater collection and conveyance systems. Therefore, future development consistent with the housing element would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite where future development consistent with the housing element would occur.

San Francisco does not contain any riverine flood plains or other surface waterways that convey flood flows. In most areas of the city, stormwater is collected and conveyed in the city's combined sewer system. During extreme storms, stormwater is also conveyed in the city's streets. Future development consistent with the housing element update would be located on developable infill parcels and would primarily involve the redevelopment of underutilized lots (e.g., new housing and mixed-use development on surface parking lots and replacement of existing one-story buildings and single-family homes with multi-story, multi-family buildings).

²⁶⁰ San Francisco Public Utilities Commission, Wastewater Enterprise, memo to San Francisco Planning Department, September 17, 2021.

²⁶¹ Personal communications from Sarah Minick 9/17/21 email (Excel spreadsheet attachment).

²⁶² Ibid.

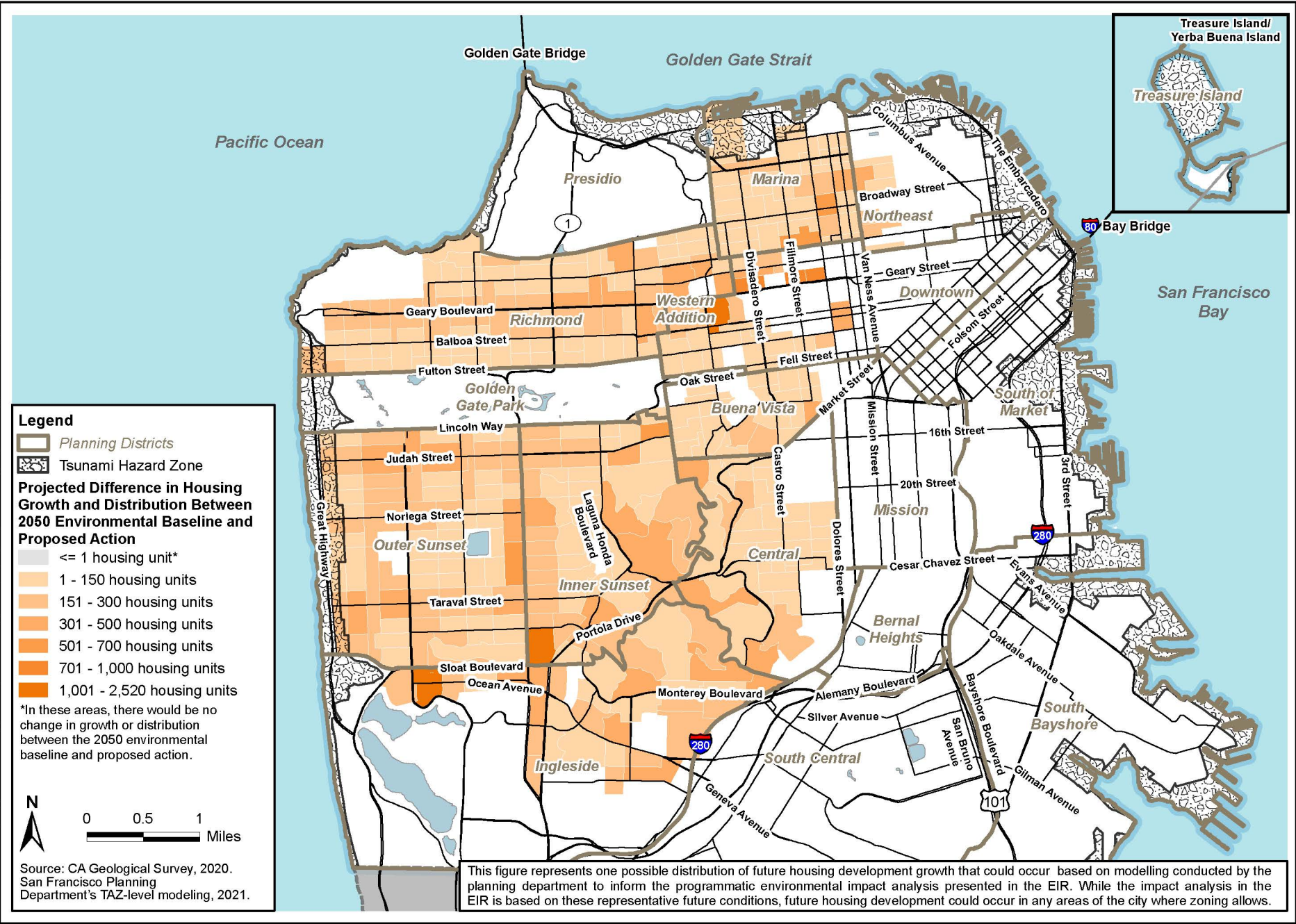
Such development would not place buildings or other structures in floodways or otherwise impede or redirect flood flows. As such, future development consistent with the housing element would not impede or redirect flood flows.

Coastal portions of the city that are subject to flooding due to storm surge and extreme tides are located within special flood hazard areas, as shown in **Figure 4.1-30**, p. 4.1-180. As discussed in the “Environmental Setting,” above, the department anticipates that without intervention the areas of the city that are vulnerable to coastal flooding will expand in the future due to projected sea level rise. As shown in **Figures 4.1-32** through **4.1-35**, pp. 4.1-182 through 4.1-185, the areas of the city that are vulnerable to coastal flooding under both existing 2020 conditions and in the future with projected sea level rise are located primarily in the low-lying areas near the bay, the western shoreline, and in South of Market near Islais and Mission creeks. The proposed action would not result in increased development in these areas but would direct an increased share of the city’s future growth to areas of the city that are outside of the existing special flood hazard areas and areas that may be affected by future sea level rise compared to the 2050 environmental baseline. As shown in **Figures 4.1-34** and **4.1-35**, pp. 4.1-184 and 4.1-185, small portions of the city in the Marina and Richmond planning districts may be vulnerable to coastal flooding in the future due to projected sea level rise in 2100 without intervention, such as seawalls, levees, or other flood control measures. Nevertheless, by shifting a greater portion of future growth away from existing and future flood hazard areas in the eastern side of the city to areas that are less vulnerable to coastal flooding, the proposed action would decrease the overall risk of flooding relative to the 2050 environmental baseline. Therefore, the proposed action would not substantially exacerbate an existing or future flood hazard resulting in a substantial risk of loss, injury, or death. For the reasons stated above, the proposed action would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on- or offsite; substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. Therefore, impacts would be *less than significant*, and no mitigation measures are necessary.

Impact HY-4: In flood hazard, tsunami, or seiche zones, the proposed action would not risk a release of pollutants due to project inundation. (*Less than Significant*)

Coastal portions of the city are located within special flood hazard areas, as shown in **Figure 4.1-30**, p. 4.1-180. Tsunamis, or seismic sea waves, are large, long-period waves. These are typically generated by underwater seismic disturbances, volcanic eruptions, or submarine landslides. Damaging tsunamis are not common on the California coast. Most California tsunamis are associated with distant earthquakes rather than local earthquakes. As shown in **Figure 4.1-36**, areas adjacent to the bay in the northeastern, eastern, southeastern, and western portions of the city are vulnerable to inundation by tsunami. A seiche is an oscillation within a water body, such as a bay, that may cause local flooding. A seiche could occur in San Francisco Bay because of seismic or atmospheric activity. Seiches can result in long-period waves that cause runup or overtopping at adjacent landmasses, similar to tsunami runup. According to the historical record, seiches are rare. Nevertheless, low-lying areas of the city along the bay shoreline may be vulnerable to seiches.

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As shown in **Figure 4.1-36**, compared to the 2050 environmental baseline, future development consistent with the housing element update would result in less development in areas near the bay shoreline that are vulnerable to inundation due to flood hazard, tsunami, or seiche zones, and would shift a greater portion of future growth to areas of the city that are not vulnerable to these hazards compared to the 2050 environmental baseline. However, as shown in **Figure 4.1-36**, the housing element update would encourage increased density within the tsunami hazard area along the city's western shoreline. As such, future development consistent with the housing element update located in this area would be vulnerable to inundation in the case of a tsunami.

By shifting a greater portion of future growth away from low lying areas near the bay on the eastern side of the city to transit corridors and well-resourced areas that are less vulnerable to inundation due to coastal flooding, tsunami, and seiche zones, the proposed action would reduce the risk of release of pollutants due to these hazards relative to the 2050 environmental baseline. Therefore, the proposed action would not result in an increased risk of the release of pollutants due to inundation in flood hazard, tsunami, or seiche zones. Moreover, future development consistent with the housing element update that may be located within the tsunami hazard zone along the western shoreline would not result in a substantial impact on water quality related to the release of pollutants due to inundation because (1) the probability of a tsunami occurring is extremely low, (2) neither construction nor operation of residential development would involve the use or storage of large quantities of hazardous materials or other pollutants, and (3) in case a tsunami were to inundate San Francisco's western shoreline, any release of pollutants from future development consistent with the housing element would be insubstantial relative to pollutants that would be released by other existing development and uses within this tsunami inundation zone.

For the reasons stated above, impacts on water quality related to the release of pollutants from inundation due to flood hazard, tsunami, or seiche zones would be *less than significant*, and no mitigation measures are necessary.

Impact HY-5: The proposed action would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (*Less than Significant*)

As discussed under "Regulatory Framework," above, San Francisco Bay waters are under the jurisdiction of the regional board, which established regulatory standards and objectives for water quality as defined in the basin plan. The basin plan provides numerical and narrative water quality objectives designed to protect beneficial uses. Future development consistent with the housing element update would be served by the city's combined sewer system. Prior to discharge to the bay or ocean, all wastewater collected in the combined system is treated in accordance with the water quality standards and waste discharge requirements specified in the NPDES permits for the city's wastewater treatment plants. Therefore, the proposed action would not conflict with or obstruct implementation of the basin plan.

Furthermore, as previously discussed, although groundwater is present in the city, no groundwater management plan is required because there are no medium- or high-priority groundwater basins within the city, as designated by the California Department of Water Resources. Impacts of future development consistent with the housing element update related to implementation of a water quality control plan or sustainable groundwater management plan would be similar to the 2050 environmental baseline. Therefore, future development

consistent with the housing element update would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be *less than significant*, and no mitigation measures are necessary.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050; therefore, these projects are considered in this cumulative analysis.

Impact C-HY-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on hydrology and water quality. (*Less than Significant*)

Future development consistent with the Waterfront Plan Update would result in a decrease in impervious surface coverage because goals and policies of the plan include serving as an environmentally sustainable port through enhanced open space, prioritizing development of natural infrastructure, and incorporating green infrastructure in stormwater management. None of the cumulative projects including BART's Second Transbay Tube Project, Downtown Congestion Pricing, Increased Caltrain Service and Pennsylvania Avenue Extension, and routine infrastructure projects would add impervious surface coverage in the city. Therefore, stormwater volumes and quality would be similar to existing conditions and no adverse impacts on water quality would occur. For the same reason, none of the cumulative projects would affect groundwater recharge in the city. Therefore, there would be no significant cumulative impacts related to increased impervious cover related to water quality or groundwater recharge.

Cumulative projects, including future development consistent with the Waterfront Plan Update, the BART Second Transbay Tube Project, Increased Caltrain Service and Downtown Extension and Pennsylvania Avenue Extension, and certain routine infrastructure projects would be located in areas that are vulnerable to flood hazards as a result of coastal storm surge, extreme tides, sea-level rise, seiche, tsunamis, and/or stormwater. However, none of these projects would impede or redirect flood flows or in any way exacerbate existing flood hazards. Therefore, the proposed action would not combine with any of the cumulative projects to result in a significant cumulative impact related to hazards from flooding, seiche, or tsunamis.

For the reasons state above, cumulative impacts related to hydrology and water quality would be *less than significant*.

Hazards and Hazardous Materials²⁶³

ENVIRONMENTAL SETTING

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under California Code of Regulations (CCR) title 22, the term *hazardous substance* refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties, (1) toxicity, (2) ignitability, (3) corrosiveness, and (4) reactivity (CCR title 22, chapter 11, and article 3). A hazardous material is defined in CCR title 22 as:

[a] substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed. (CCR title 22 section 66260.10)

Hazardous materials in various forms can lead to death, serious injuries, or long-lasting health effects; they can also damage buildings, homes, and other property. Hazards to human health and the environment can occur during the production, storage, transport, use, or disposal of hazardous materials.

The city is made up of various land uses, including residential, commercial, office, and industrial uses. Because of their nature, residential uses typically do not present significant hazardous material impacts. With residential uses, hazardous materials are not handled in significant quantities, and the materials used for cleaning and maintenance are not classified as acutely hazardous. Industrial and commercial land uses have a higher likelihood of hazardous materials impacts.

Industrial land uses include a wide range of business operations (including, but not limited to, manufacturing plants, warehousing, distribution facilities, waste management facilities) that have the potential to create hazardous materials impacts. Some industrial facilities store hazardous materials in underground storage tanks (USTs) and/or aboveground storage tanks.

Commercial locations can include vehicle repair sites, fueling stations, and dry-cleaning facilities. Like industrial facilities, some commercial sites store hazardous materials in tanks as well as designated areas within the facility. Hazardous materials spills and leaks associated with industrial and commercial sites can lead to soil and groundwater contamination. Improper storage and use of hazardous materials can also lead to contaminated soil and groundwater.

In addition to industrial and commercial sites, contaminated media has the potential to exist within other locations, such as those adjacent to historically impacted sites, areas containing artificial fill and in areas near major historic thoroughfares (e.g., freeways).

The main objective of the housing element update is to provide a road map for the future of housing in San Francisco through goals, policies, and actions and thus, would result primarily in the future development of

²⁶³ For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

residential and mixed-use residential with retail and commercial use. Industrial land use would not occur as part of the housing element update.

Hazardous Materials Sites within the City

Maier Sites

The Site Assessment and Mitigation Program (known as the Maier Program or Maier Ordinance), as authorized under article 22A of the San Francisco Health Code, applies to sites where there is potential to encounter hazardous materials, primarily industrial or formerly industrial zoning districts, sites with current or former industrial uses or USTs, sites with historic Bay fill, and sites close to freeways. The Maier Ordinance, which is implemented by the San Francisco Department of Public Health (health department), requires investigation and if necessary, proper remediation of contaminated soils, groundwater, and soil vapors that are encountered in the building construction process. All projects in the city that disturb 50 cubic yards or more of soil on sites with potentially hazardous soil or groundwater are subject to this ordinance.

Any site or project, including a site not in the Maier area or a project that proposes to excavate or grade less than 50 cubic yards of soil, could be added to the Maier Program if there is potential for it to contain subsurface soil or groundwater contamination that could present a public health risk if disturbed. The health department determines if a site poses a potential risk. After an initial screening process, the health department oversees all investigation and remediation on the site (if necessary). As of September 2020, there were approximately 2,000 Maier sites in the city. However, many of the Maier sites have been remediated to meet applicable regulatory standards and have been closed by the health department. Closed sites generally are no longer considered a significant risk to future development but remain on the Maier map to inform future activities on those sites.

Cortese List Sites

The provisions in Government Code section 65962.5 are commonly referred to as the *Cortese List*. The list—specifically, a site’s presence on the list—has bearing on the local permitting process as well as compliance with CEQA.²⁶⁴ The following resources contain sites that meet Cortese List requirements:

- Sites listed in the leaking underground storage tank (LUST) sites database, part of the state water board’s GeoTracker site
- List of hazardous waste and substance sites from the California Department of Toxic Substances Control (DTSC)
- List of solid waste disposal sites identified by the Bay Area Regional Water Quality Control Board (regional board) with waste constituents above hazardous waste levels
- List of active cease-and-desist orders and cleanup-and-abatement orders from the regional board
- List of hazardous waste facilities identified by DTSC subject to corrective action, pursuant to Health and Safety Code section 25187.5

²⁶⁴ California Environmental Protection Agency, *Cortese List Background and History*, 2021, <https://calepa.ca.gov/sitecleanup/corteselist/Background/>, accessed: August 20, 2021.

As of September 2020, approximately 2,300 sites have been identified as Cortese List sites within the city. Environmental information found in the GeoTracker and EnviroStor online databases, as well as Cortese List, is dynamic and can change over time (i.e., new sites can appear, site status can change).

State Water Resources Control Board and Department of Toxic Substances Control

A review of the state water board's GeoTracker²⁶⁵ database and DTSC's EnviroStor²⁶⁶ database of hazardous materials sites listed identified multiple hazardous material cleanup sites, including LUST cleanup sites, cleanup program sites, military cleanup sites, and DTSC cleanup sites throughout the city (see **Figures 4.1-37a** through **4.1-37d**, pp. 4.1-208 through 4.1-211, for locations). Although multiple GeoTracker and EnviroStor sites are located throughout the city, many of these sites have been remediated to the satisfaction of the oversight agency and have been granted closure. Closed sites typically are not considered significant risks to future development provided that such projects are consistent with the land uses cleared as part of those site closures. Because of the programmatic nature of this document, not every site identified in GeoTracker or EnviroStor is listed individually. A description of each hazardous materials site classification is included below.

State Water Resources Control Board GeoTracker Sites

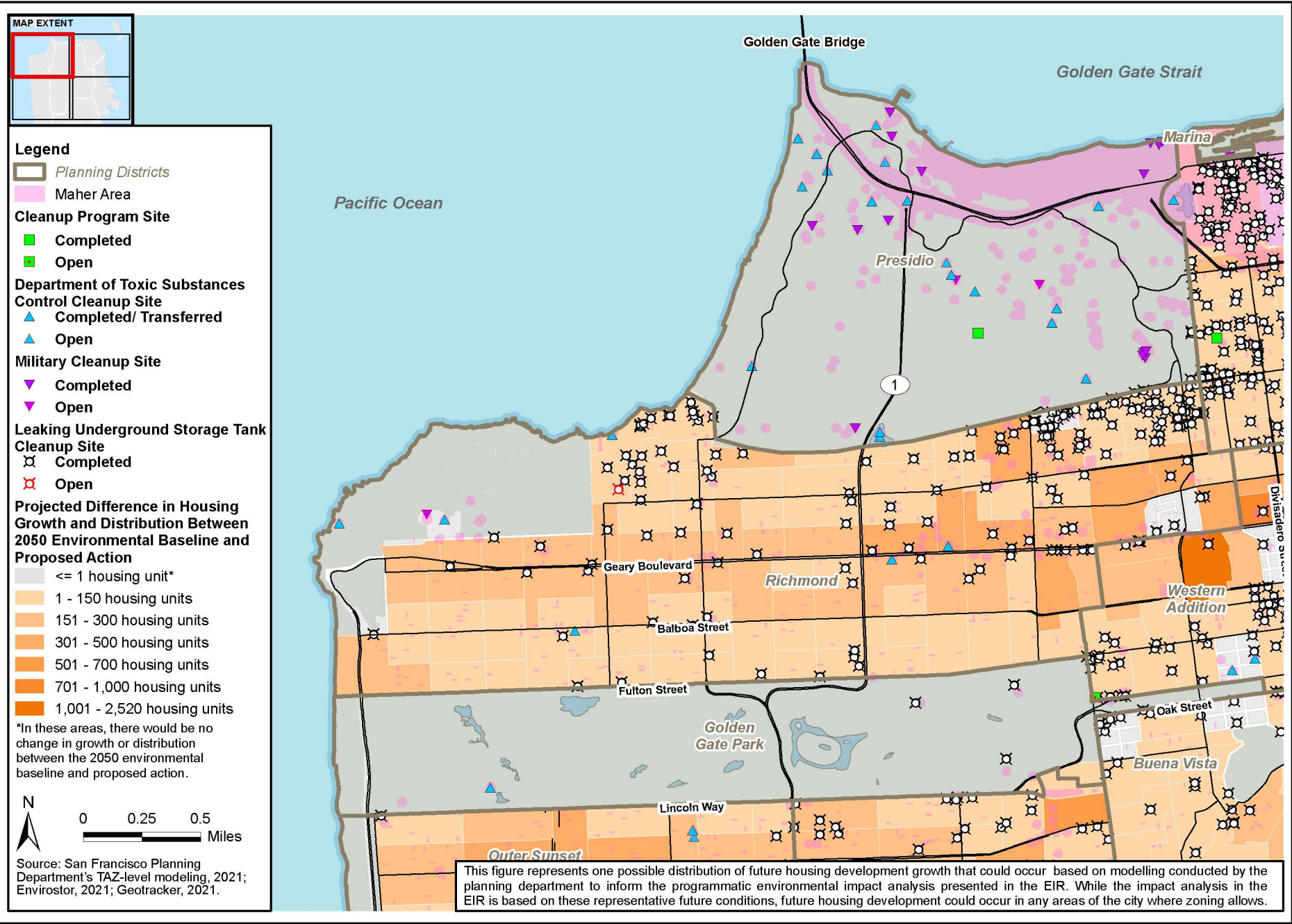
LUST Cleanup Sites: All UST sites with an unauthorized release (i.e., leak or spill) of hazardous substances, usually hydrocarbons. The sites have been or are currently being remediated. In GeoTracker, LUST sites consist almost entirely of fuel-contaminated sites, which are regulated pursuant to CCR title 23, chapter 16, article 11. Chapter 16 addresses UST regulations, while article 11 describes the corrective action requirements for sites with hazardous material releases.

Cleanup Program Sites: All "non-federally-owned" sites that are regulated under the state water board's Site Cleanup Program and/or similar programs regulated by each of the nine regional boards. Cleanup program sites are varied. They include, but are not limited to, pesticide and fertilizer facilities, rail yards, ports, equipment supply facilities, smelters, industrial manufacturing and maintenance sites, dry-cleaning operations, bulk transfer facilities, refineries, mines, landfills, Resource Conservation and Recovery Act (RCRA)/Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanup sites, and some brownfields. Unauthorized releases detected at cleanup program sites are highly variable and include, but are not limited to, hydrocarbon solvents, pesticides, perchlorate, nitrate, heavy metals, and petroleum constituents.

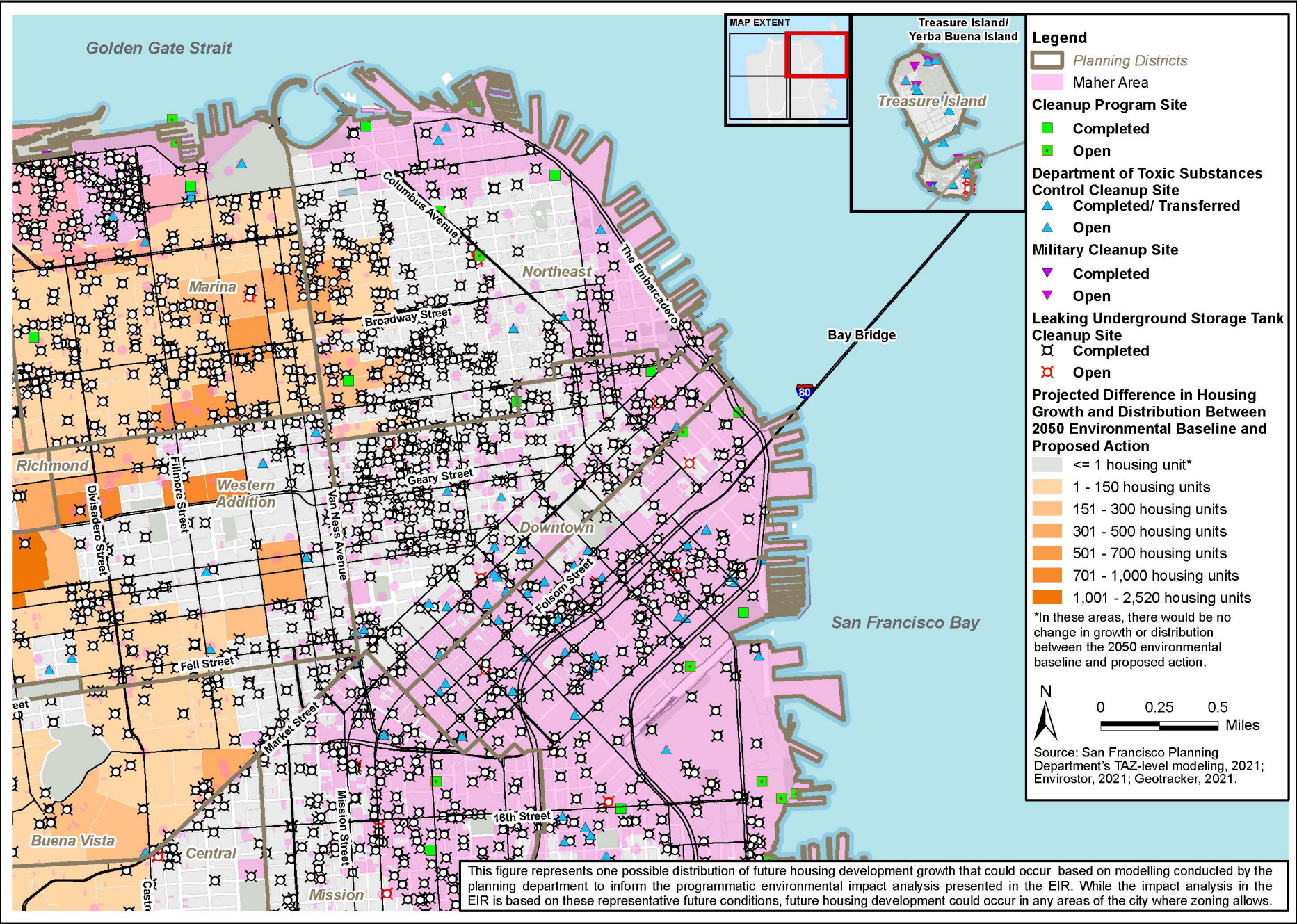
Military Cleanup Sites: Cleanup sites on military bases. The wide-ranging discharges are regulated primarily under the RCRA/CERCLA by each of the nine regional boards.

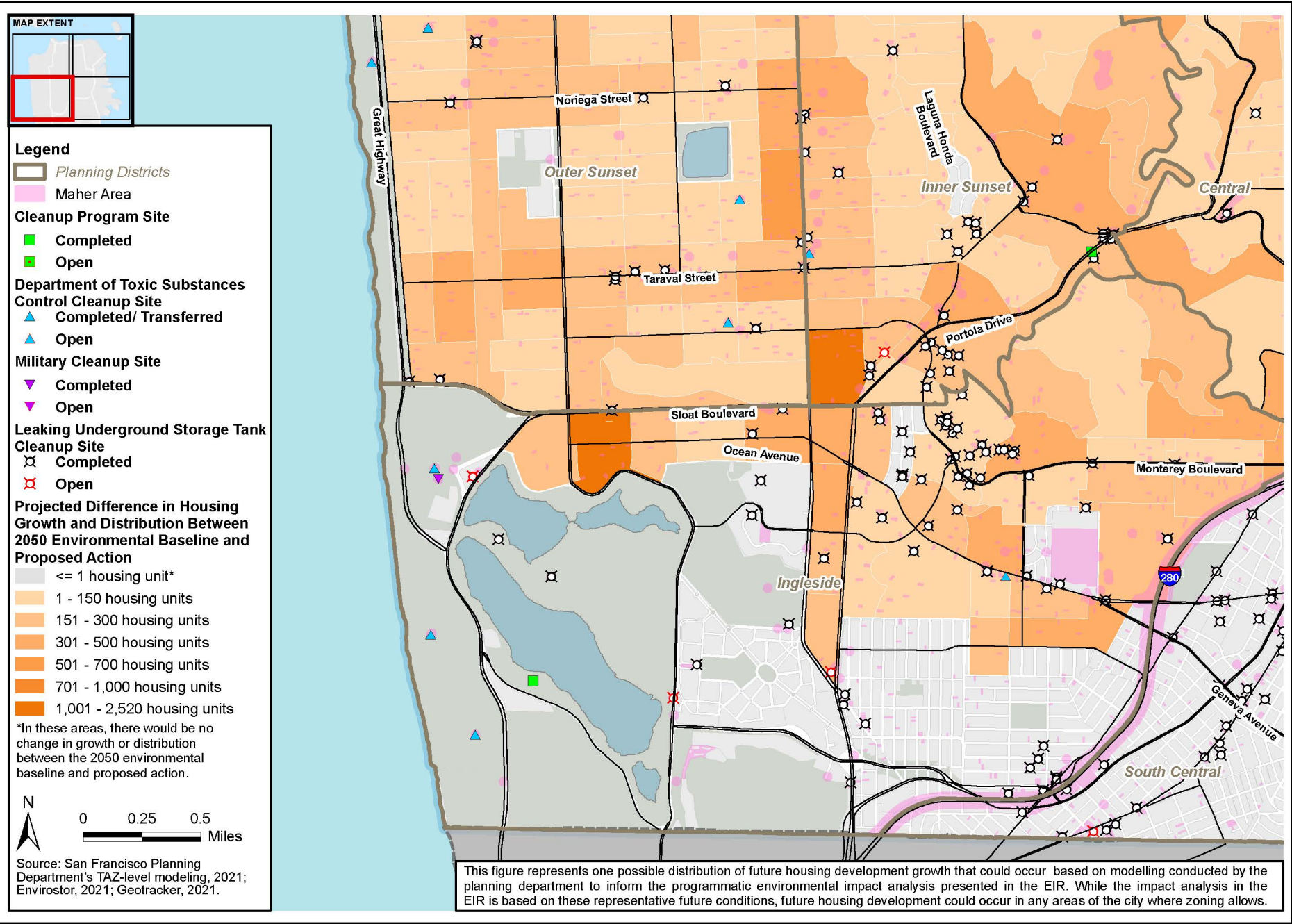
²⁶⁵ State Water Resources Control Board's GeoTracker: <https://geotracker.waterboards.ca.gov/>

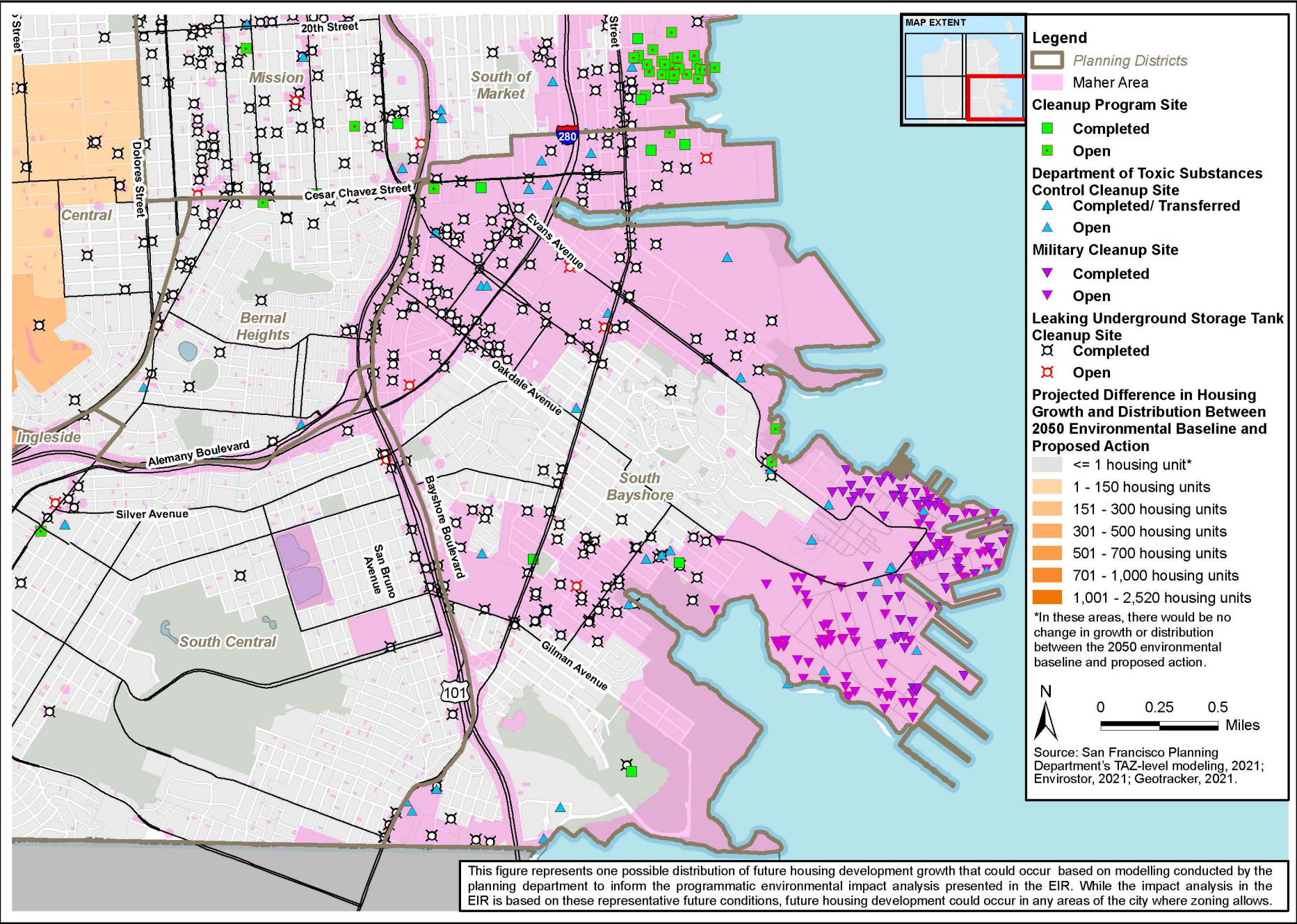
²⁶⁶ Department of Toxic Substances Control's EnviroStor: <https://www.envirostor.dtsc.ca.gov/public/>



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Department of Toxic Substances Control EnviroStor Sites

DTSC Cleanup Sites: These include several sub-categories. There could be multiple sub-category sites within a city, including: Cal-Mortgage, Closed Base, Corrective Action, Evaluation, Expedited Remedial Action Program, Federal Superfund (National Priorities List, Formerly Used Defense Sites, Hazardous Waste Property or Border Zone Property Evaluation, Historical, Open Base, Permitted, School, State Response, Tiered Permit and Voluntary Cleanup. A description of these categories is found on the EnviroStor²⁶⁷ website.

REGULATORY FRAMEWORK

Hazardous Materials Handling

Article 21 provides for safe handling of hazardous materials in the city. It requires any person or business who handles, sells, stores, or otherwise uses specified quantities of hazardous materials to keep a current certificate of registration and implement a hazardous materials business plan. A special permit is required for USTs. This article also incorporates state regulations controlling USTs.

Article 21A provides for safe handling of federally regulated hazardous, toxic, and flammable substances in the city, requiring businesses that use these substances to register with the health department and prepare a risk management plan that includes an assessment of the effects of an accidental release and programs for preventing and responding to an accidental release.

Article 22 also provides for safe handling of hazardous wastes in the city. It authorizes the health department to implement state hazardous waste regulations. It gives the health department the authority to conduct inspections and document compliance.

Onsite Hazardous Materials

The Federal Toxic Substances Control Act (1976) and the RCRA (1976) established an U.S. EPA-administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle-to-grave” system of regulating hazardous wastes.

The U.S. Department of Transportation is responsible for regulating and ensuring the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation. The U.S. Department of Transportation develops regulations and standards for classifying, handling, and packaging shipments of hazardous materials within the United States to minimize threats to life, property, or the environment due to hazardous materials–related incidents.

San Francisco Health Code article 21 addresses issues related to the closure of USTs and hazardous materials handling facilities. To close a facility (including USTs), a closure plan must be prepared that identifies how the need for future maintenance of the facility would be eliminated, how the threat to the environmental and public health and safety would be eliminated, and how all hazardous materials in the facility would be removed and

²⁶⁷ Department of Toxic Substances Control, *EnviroStor*, 2022, <https://www.envirostor.dtsc.ca.gov/public/>, accessed: January 3, 2022.

appropriately disposed of. The plan must be submitted to the city for approval prior to closure. This article also requires soil from the UST excavation, and possibly the groundwater, to be sampled. Upon completion of closure, a final report documenting UST removal activities and any residual contamination left in place must be submitted to the city. Upon approval of this report, the city issues a certificate of completion. If a release is indicated, the site owner is required to assess the extent of any contamination and conduct site remediation, as needed, in compliance with the state water board requirements.

The San Francisco Health Code article 22A, also known as the Maher Ordinance and described above, amended August 2013, requires a project sponsor to conduct a site assessment to determine the potential for site contamination and the level of exposure risk associated with the project prior to issuance of a building permit. Based on that information, the project sponsor may be required to conduct additional investigations. If the results of the additional investigations reveal the presence of hazardous substances (i.e., in excess of state or federal standards), the project sponsor would be required to submit appropriate documentation to the health department or other appropriate state or federal agencies and remediate any site contamination prior to the issuance of any building permit. For departments, boards, commissions, and agencies of the city that authorize construction or improvements on land under their jurisdiction where no building or grading permit is required, the ordinance requires protocols to be developed between the project sponsor and the health department that would achieve the environmental and public health and safety goals of article 22A. The Maher Ordinance also requires testing of groundwater when contaminated groundwater is suspected.

The health department also implements the Voluntary Remedial Action Program for cleanup on properties contaminated by hazardous materials in San Francisco, as authorized by California Health and Safety Code sections 101480 through 101490. This program addresses any site not covered under the Maher Ordinance that may require site investigation or remediation. These sites may include old dry cleaners, drug labs, etc., that may not be subject to a building permit but may have contamination. Under this program, the responsible party at a contaminated site may request the health department to review Phase I and II investigations²⁶⁸ and supervise the remedial action taken at a site, establish cleanup goals, and issue a letter or other document that certifies that the cleanup goals have been met. To obtain these oversight services, which streamline the site assessment and remediation process, the responsible party must enter into a remedial action agreement with the health department. Depending on the contaminants present or the complexity of site issues, some sites may be more appropriately handled by a state agency, such as the DTSC or regional board.

Hazardous Building Materials

Asbestos

Section 19827.5 of the California Health and Safety Code requires local agencies not to issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The air district is vested by

²⁶⁸ A Phase I investigation uses existing information to assess a site's condition by examining current and historical uses of the site while determining potential threats to human health or the environment. A Phase II investigation is generally recommended if the Phase I investigation results reveal known or potential contamination. A Phase II involves sampling to evaluate the potential presence of contamination and determines the sources and magnitude of impacts.

the California legislature with the authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement. The air district must be notified 10 days in advance of any proposed demolition or abatement work. Notification includes the following:

- The names and addresses of operators and persons responsible
- A description and the location of the structure to be demolished/altered, including size, age, and prior use
- The approximate amount of friable asbestos that would be removed or disturbed
- The scheduled starting and completion dates of demolition or abatement
- The nature of the planned work and methods to be employed
- The procedures to be employed to meet air district requirements
- The name and location of the waste disposal site to be used

The air district randomly inspects asbestos removal operations. In addition, the air district will inspect any removal operation when a complaint has been received. The local office of the California Division of Occupational Safety and Health (Cal/OSHA) must be notified when asbestos abatement is carried out. Asbestos abatement contractors must follow state regulations contained in title 8 of CCR, sections 1529 and 341.6 through 341.17, where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest that details the hauling of the material from the site and the disposal of it. Pursuant to California law, the building department would not issue the required permit until the applicant has complied with the notice and abatement requirements described above.

Lead-Based Paint

Work that could result in the disturbance of lead-based paint must comply with section 3425 of the building code, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures. Where there is any work that may disturb or remove lead-based paint on the exterior of any building built prior to 1979, section 3425 requires specific notification and work standards. It also identifies prohibited work methods and penalties.

Section 3425 applies to the exterior of all buildings or steel structures constructed prior to 1979, which are assumed to have lead-based paint on their surfaces, unless demonstrated otherwise through laboratory analysis, as well as the interior of residential buildings, hotels, and childcare centers. The ordinance contains performance standards, including the establishment of containment barriers that are at least as effective at protecting human health and the environment as those in the U.S. Department of Housing and Urban Development Guidelines, the most recent guidelines for evaluation and control of lead-based paint hazards, and identifies prohibited practices that may not be used during disturbances or removal of lead-based paint. Any person performing work subject to the ordinance shall, to the maximum extent possible, protect the ground

from contamination during exterior work, protect floors and other horizontal surfaces from work debris during interior work, and make all reasonable efforts to prevent migration of lead paint contaminants beyond containment barriers during the course of the work. Cleanup standards require the removal of visible work debris, including the use of a high-efficiency particulate air filter (HEPA filter) vacuum following interior work. The ordinance also includes notification requirements as well as requirements regarding signs, provisions regarding inspection and sampling for building department compliance, and penalties for non-compliance with the ordinance.

The demolition or renovation of structures with materials that contain lead in their interiors could expose workers and the public to lead. However, these activities would be subject to the Cal/OSHA Lead in Construction Standard (CCR title 8, section 1532.1). This standard requires development and implementation of a lead compliance plan when materials that contain lead could be disturbed during construction. The plan must describe activities that could emit lead, the methods that would be used to comply with the standard, safe work practices, and a plan to protect workers from exposure to lead during construction activities. Cal/OSHA would require 24-hour notification if more than 100 square feet of materials that contain lead would be disturbed.

Polychlorinated Biphenyls or Diethylhexyl Phthalate

Fluorescent light ballasts can contain polychlorinated biphenyls (PCBs) or diethylhexyl phthalate (DEHP). PCBs have been prohibited in most uses since 1978, although some electrical transformers still in use today use oils that contain PCBs. U.S. EPA has classified DEHP as a probable human carcinogen. Switches, thermostats, and fluorescent light tubes can contain mercury, which can harm the brain, kidneys, lungs, and immune systems of people. The following regulations address abatement, removal, and disposal of these hazardous building materials:

Federal Toxic Substances Control Act of 1976 (U.S. Code, title 15, chapter 53, and 40 CFR part 761) provides U.S. EPA with the authority to require reporting, record-keeping, and testing and enact restrictions related to chemical substances. The act places special attention on PCBs, asbestos, lead, and mercury. As part of the Toxic Substances Control Act, U.S. EPA identified DEHP as a chemical that requires an action plan; DEHP is listed as a hazardous waste under federal regulations (40 CFR section 261.33).

The California Universal Waste Rule (22 CCR section 66261.9) identifies fluorescent tubes and bulbs and mercury-containing equipment, including thermostats and switches, as hazardous waste and regulates their disposal (22 CCR section 66261.50).

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to hazards and hazardous materials associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Create a significant hazard for the public or the environment through the routine transport, use, or disposal of hazardous materials
- Create a significant hazard for the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard for the public or the environment
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires

There are no airports within the city. The closest airport to the city is San Francisco International Airport, approximately 5 miles south of the city in San Mateo County. According to the *Comprehensive Airport Land Use Plan for the Environs of San Francisco International Airport*,²⁶⁹ Exhibit IV-3, the city is not within San Francisco International Airport's airport influence area, including airport safety compatibility zones. Other airports in the area include Oakland International Airport, approximately 6 miles to the east on the east side of San Francisco Bay, and San Carlos Airport, approximately 15 miles to the southeast. The city is also not within the airport influence area of these airports. Therefore, the topic of hazards related to airports is not applicable to the proposed action and is not discussed further in this EIR.

The city does not include any Local Responsibility Areas for fire prevention or lands that have been classified as Very High Fire Hazard Severity Zones.²⁷⁰ Therefore, the topic of impacts due to wildland fires is not applicable to the proposed action and is not discussed further in this EIR.

²⁶⁹ City/County Association of Governments of San Mateo County, 2012, *Comprehensive Airport Land Use Plan for the Environs of San Francisco International Airport*. Available: https://www.gsweventcenter.com/Draft_SEIR_References/2012_0701_CCAG.pdf, accessed: March 31, 2022.

²⁷⁰ California Department of Forestry and Fire Protection, 2007, *Draft Fire Hazard Severity Zones in LRA San Francisco County*. Available: https://osfm.fire.ca.gov/media/6791/fhszl06_1_map38.pdf, accessed: August 20, 2021.

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

As described above, there are numerous federal, state, and local laws regulating the management, use, investigation, cleanup, remediation, and treatment of hazardous materials. These laws and regulations are independently managed by different agencies at all levels of government. A desktop review of hazards and hazardous material conditions within the city to support the discussion in this section was conducted using the state water board’s GeoTracker and DTSC EnviroStor websites along with Maher Program and CalEPA Cortese List data provided by the city. The analysis of the impacts of the housing element update related to hazards and hazardous materials reviews the existing hazardous material sites in the city and assesses the potential impacts on local emergency plans. The analysis also considers whether the housing element update would exacerbate existing hazardous conditions or present new conditions that could create a significant hazard for the public or the environment.

Impacts and Mitigation Measures

Impact HAZ-1: The proposed action would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (*Less than Significant*)

Construction

Construction of future development consistent with the housing element update would require the routine transport, use, or disposal of hazardous materials and hazardous wastes within the city. Although future development consistent with the housing element update would result in more development and the associated additional use of hazardous materials compared to the 2050 environmental baseline, the number of incidents involving the transport, use, or disposal of hazardous materials during construction would remain low

due to the anticipated nature of construction activities required for future development consistent with the housing element update.

If accidentally released during construction of future housing, these materials could result in exposure risks for construction personnel and nearby residents. Such transport, use, and disposal must comply with applicable federal and state regulations, such as the RCRA, U.S. Department of Transportation hazardous materials regulations, and Cal/OSHA regulations (described in detail in under Regulatory Framework). Although fuel, paint products, lubricants, solvents, cleaning products, and fertilizers would be transported, used, and disposed of, these materials are typically used in construction projects.

In addition to the applicable federal and state regulations related to the handling of hazardous materials mentioned above, a SWPPP must be prepared and implemented during future housing construction consistent with the housing element update that would disturb more than 5,000 square feet of soil, in accordance with state water board requirements. The SWPPP has two major objectives, (1) to help identify the sources of sediment and other pollutants that affect the quality of stormwater discharges and (2) to describe and ensure implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater and non-stormwater discharges. Furthermore, larger construction projects under the proposed housing element update disturbing 1 or more acres of land or projects that are a part of a common plan of development that disturbs more than 1 acre of land would require coverage under the Construction General Permit (order no. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). As part of the Construction General Permit, preparation of a SWPPP would also be required (prior to construction activities). A site-specific SWPPP during projects that disturb 5,000 square feet of soil or as part of a Construction General Permit would further reduce the potential for hazardous materials releases during construction. Because compliance with existing regulations is mandatory, construction activities for future development consistent with the housing element update are not expected to create a significant hazard for the public or the environment through the routine transport, use, or disposal of hazardous materials. This impact would be *less than significant*, and no mitigation measures are necessary.

Operations

Operation of future development consistent with the housing element update would require the use of common hazardous materials, such as solvents, paints, and fuels. Although future development consistent with the housing element update would result in more development and the associated additional use of hazardous materials compared to the 2050 environmental baseline, the number of incidents involving the transport, use, or disposal of hazardous materials during operation would remain low due to the anticipated residential nature of future development consistent with the housing element update. The aforementioned common hazardous materials are commercial products labeled to inform users of potential risks and appropriate handling procedures. Furthermore, they would be used in small amounts, and any release would be localized and cleaned up as it occurs. Moreover, these commercial products are typically consumed during use. It is expected that commercial and retail uses in future development consistent with the housing element update would handle larger quantities of hazardous materials compared to residential uses; however, they would include materials similar as those described above (solvents, paints, and fuels). Releases involving these materials would also be cleaned as they occur. Therefore, the routine transport, use, or disposal of hazardous materials associated with

operation of future development consistent with the housing element update would represent a *less-than-significant* impact, and no mitigation measures are necessary.

Impact HAZ-2: The proposed action would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (*Less than Significant*)

Affected Sites

Hazardous material sites with the potential for contaminated onsite soil and/or groundwater exist within the city, including LUST cleanup sites, cleanup program sites, military cleanup sites, DTSC cleanup sites, and Cortese List and Maher sites. A detailed description of each type of hazardous material site is provided in the Environmental Setting, above.

As of September 2020, approximately 2,000 Maher sites and 2,300 Cortese List sites were located within the city, primarily located on the north and eastern sides of the city (see **Figures 4.1-37a** through **4.1-37d**, pp. 4.1-208 through 4.1-211, for locations). Data from hazardous materials sites are dynamic and can change over time; as such, the potential exists for future, currently unlisted hazardous material sites to appear within an area that has been designated for future development. The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. Thus, the anticipated location of future development consistent with the housing element update would overlap with or be located adjacent to hazardous material sites to a lesser extent than development under the 2050 environmental baseline. Depending on the contaminants of concern and the extent of contamination, excavation, and other ground-disturbing activities, construction could encounter contaminated groundwater and/or soil and result in the release of hazardous materials into the surrounding environment. Without proper protections, construction personnel or the surrounding community could be exposed to hazardous materials during construction activities, including excavation, grading, dewatering, or during site investigation and remediation. In addition, select hazardous materials produce soil vapor that could accumulate in structures, causing nuisance vapors, adverse health effects, or flammable or explosive conditions. However, compliance with applicable local, state, and federal regulation (discussed under the Regulatory Framework) would ensure that impacts associated with construction within contaminated soil and groundwater would be *less than significant*, and no mitigation measures are necessary. Remediation of these sites would be conducted in accordance with the oversight agency and requirements of the program it is a part of and could include, but not be limited to removal of affected soils for disposal at a permitted hazardous materials disposal facility, groundwater treatment, and groundwater monitoring.

Media Disposal

Construction of future development consistent with the housing element update would require media disposal (e.g., remediation, tank removal, dewatering) within the city. Although future development consistent with the housing element update would result in more development and the associated additional disposal of media compared to the 2050 environmental baseline, the generator of the hazardous wastes would be required to

follow state and federal regulations regarding manifesting the wastes, using licensed waste haulers, and disposing the materials at a permitted disposal or recycling facility. Where remediation or tank removal requires offsite transport of contaminated soil or groundwater, these materials could be classified as a restricted or hazardous waste under state or federal regulations, depending on the specific characteristics of the materials. If dewatering is necessary during construction and the groundwater produced requires discharge to the sewer system, the discharge would be conducted in compliance with article 4.1 of the San Francisco Public Works Code, as supplemented by order no. 158170, which specifies conditions and criteria for discharges of groundwater. This article also prohibits discharges of hazardous wastes into the combined sewer system. The discharged water would have to be sampled during dewatering to demonstrate that discharge limitations in the ordinance have been met. If the groundwater does not meet discharge requirements, onsite pretreatment may be required before discharge to the sewer system. If standards cannot be met with onsite treatment, offsite disposal by a certified waste hauler would be required. Adherence to the aforementioned regulations would result in *less-than-significant* impacts, and no mitigation measures are necessary.

Demolition

Construction of future development consistent with the housing element update would result in demolition of existing buildings and structures, some of which contain hazardous materials such as lead-based paint and asbestos. Although future development consistent with the housing element update would result in more development and more demolition compared to the 2050 environmental baseline, demolition of structures containing hazardous materials would be subject to local, state, and federal regulations that protect construction workers, the public, and the environment from exposure to these materials. For example, an asbestos and lead-based paint survey is required prior to the demolition of any structures built prior to 1980. An asbestos survey would be conducted in accordance with Cal/OSHA (8 CCR section 1529) and the National Emission Standards for Hazardous Air Pollutants for Asbestos Surveys (40 CFR part 61, subpart M). In addition, the air district must be notified 10 days in advance of any proposed demolition or abatement work. Section 3425 of the city's building code, *Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures*, along with Cal/OSHA requirements, would be followed when handling materials containing lead. Additional regulations that address abatement, removal, and disposal of hazardous building materials are included in the Regulatory Framework. Adherence to the aforementioned regulations associated with demolition activities would result in *less-than-significant* impacts, and no mitigation measures are necessary.

Operations

Operation of future development consistent with the housing element update would not involve the use of significant quantities of hazardous materials. Although future development consistent with the housing element update would result in more development and the associated additional use of hazardous materials compared to the 2050 environmental baseline, the number of releases involving hazardous materials during operation would remain low because the aforementioned hazardous materials are common household cleaners and typically used in small quantities. Accidental releases are typically localized and cleaned up as they occur. Moreover, these commercial products are typically consumed during use. It is expected that future commercial and retail uses in development consistent with the housing element update would handle larger quantities of

hazardous materials; however, they would include materials similar as those described above (solvents, paints, and fuels). Releases involving these materials in commercial, or retail settings would be treated similarly. Potential impacts during operations would be *less than significant*, and no mitigation measures are necessary.

Impact HAZ-3: The proposed action would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. (*Less than Significant*)

The city hosts universities, colleges, public schools, and private and charter schools. Construction activities associated with future development consistent with the housing element update could occur within or immediately adjacent to hazardous material sites (as discussed in the “Environmental Setting,” above) that are within 0.25 mile of a school. Because the data for hazardous material sites are dynamic and can change over time, the potential exists for future, currently unlisted hazardous material sites to be within 0.25 mile of a school or an identified development site. Soil disturbances during construction of future development consistent with the housing element update could encounter contaminated groundwater and/or contaminated soil depending on the characteristics of the contaminant at the hazardous material site and the extent of contamination. T Future development consistent with the housing element update would result in more development and more soil disturbance compared to the 2050 environmental baseline; thus, ground-disturbing activities could release contaminated groundwater and/or soil to the environment within 0.25 mile of a school to a greater extent than under the 2050 environmental baseline. In addition, during remediation at an identified hazardous materials site, hazardous materials could be handled within 0.25 mile of a school as the materials are removed, stockpiled, and/or transported. Consequently, contaminated soils or groundwater or hazardous materials could be handled in proximity to schools in the city to a greater extent during construction of future development consistent with the housing element update compared to the 2050 environmental baseline. However, compliance with applicable local, state, and federal regulations, would ensure that impacts associated with the potential handling of hazardous materials near a school would be *less than significant*, and no mitigation measures are necessary. Remediation of these sites would be conducted in accordance with the oversight agency and requirements of the program it is a part of and could include, but not be limited to, removal of affected soils for disposal at a permitted facility, groundwater pumping and treatment, and groundwater monitoring.

As noted above, structures built prior to 1980 that would be demolished as a result of future projects consistent with the housing element update could contain hazardous materials, including asbestos and lead. However, asbestos and lead-based paint surveys would be required prior to issuance of construction permits. An asbestos survey would be conducted in accordance with Cal/OSHA (8 CCR section 1529) and the National Emission Standards for Hazardous Air Pollutants for Asbestos Surveys (40 CFR part 61, subpart M), with involvement of the air district. CCR title 8, section 1532.1 and Cal/OSHA requirements, along with applicable building codes, would be followed when handling materials that contain lead. Therefore, impacts related to asbestos or lead-containing materials within 0.25 mile of a school would be *less than significant*, and no mitigation measures are necessary.

The operation of future development consistent with the housing element update, which would be limited to residential and mixed-use residential uses, would not involve the handling or emission of hazardous or acutely

hazardous materials. It is expected that commercial and retail development consistent with the housing element update would handle larger quantities of hazardous materials; however, they would include materials similar as those previously described (solvents, paints, and fuels). Releases involving these materials in commercial, or retail settings would be treated similarly. Therefore, impacts from the use of hazardous materials within 0.25 mile of schools during the operation of future development consistent with the housing element update would be *less than significant*, and no mitigation measures are necessary.

Impact HAZ-4: The proposed action could be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard for the public or the environment. (*Less than Significant*)

As discussed under “Environmental Setting,” above, as of September 2020, 2,300 sites were identified as Cortese List (Government Code section 65962.5) sites within the city. In addition, there are LUST sites (which are also considered Cortese List sites) throughout the city. As previously mentioned, because data for hazardous material sites are dynamic and can change over time, the potential exists for future, currently unlisted Cortese List sites to appear within an identified development site. As such, construction of future projects consistent with the housing element update would occur on or immediately adjacent to sites on the Cortese List.

Depending on the contaminant characteristics and extent of contamination, soil disturbance during construction of future projects consistent with the housing element update could encounter contaminated groundwater and/or contaminated soil and result in impacts on construction personnel and the surrounding environment due to the release of hazardous materials and exacerbation of existing conditions. Remediation of these sites would be conducted in accordance with the oversight agency and requirements of the program it is a part of and could include but is not limited to removal of affected soils for disposal at a permitted facility, groundwater pumping and treatment, and groundwater monitoring. Similar to what is described under Impact HAZ-1, compliance with applicable local, state, and federal regulation, would reduce potential impacts associated with construction activities occurring within or adjacent to a Cortese List site to *less-than-significant* levels, and no mitigation measures are necessary.

Impact HAZ-5: The proposed action would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

Future development consistent with the proposed action would be required to conform to the provisions of the building code and fire code, which require life-safety protections for new buildings. Moreover, the city has a published an emergency response plan,²⁷¹ prepared by the San Francisco Department of Emergency Management as part of the city’s emergency management program, which also includes plans for hazard mitigation and disaster preparedness and recovery. The emergency response plan identifies hazards that San Francisco is particularly susceptible to (e.g., earthquakes, hurricanes, tsunamis, floods, winter storms, and acts of terrorism, including the use of chemical, biological, radiological, nuclear, and explosive weapons).

²⁷¹ City and County of San Francisco 2017. *Emergency Response Plan*. Available: https://sfdem.org/sites/default/files/CCSF%20Emergency%20Response%20Plan_April%202008%20-%20updated%20May%202017_Posted.pdf, accessed: August 20, 2021.

The emergency response plan complies with several relevant state and federal directives for emergency planning, including the California Standardized Emergency Management System and the incident command system. The emergency response plan includes sections regarding operations, including management and procedures; staffing, operations, and logistics for the city's emergency operations center; and mutual aid, which involves other agencies. The emergency response plan assigns responsibilities for disaster planning; operations, including fire and rescue, law enforcement, human services, infrastructure, transportation, communications, and community support; and logistics, as well as finance and administration, to city agencies and departments. The emergency response plan contains 16 "annexes," consistent with a federally established framework, that cover topics such as firefighting, public works and engineering, mass casualty care, and earthquakes, and other topics. Development under the housing element update would increase the population in the city that could be subject to a potential disaster.

The proposed action would not obstruct implementation of the city's emergency response plan or interfere with emergency evacuation planning because future development consistent with the housing element update would not include permanent road closures or other components that would physically impair or otherwise interfere with emergency access, response, or evacuation. Adherence to the fire code and building code, along with the emergency response plan, would reduce potential impacts related to interference with emergency response or evacuation plans to a *less-than-significant* level, and no mitigation measures are necessary.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-HAZ-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on hazards. (*Less than Significant*)

Impacts associated with hazards and hazardous materials are generally site-specific. In general, only cumulative projects with contaminated media in the immediate vicinity of future development sites would be considered because of the limited potential impact area associated with the release of hazardous materials into the environment. Therefore, the geographic context for the analysis of cumulative impacts associated with hazards and hazardous materials is site-specific.

The proposed action would result in the routine transport, disposal, or handling of hazardous materials during both construction and operations; intermittent use and transport of petroleum-based lubricants, solvents, and fuels; and the transport of affected soil to and from sites during construction activities. However, the handling and transport of hazardous materials would be regulated under federal, state, and local authority, and no significant cumulative impact would occur. Furthermore, hazardous waste generated during construction of any project would be collected, properly characterized for disposal, and transported in compliance with applicable regulations, as described under Impact HAZ-1 and “Regulatory Framework,” above. In addition, affected sites with development would undergo remediation, with oversight from applicable state and local agencies and programs (including the Maher Ordinance [San Francisco Health Code article 22A]), reducing the number of hazardous materials sites in the city. Hazardous materials are strictly regulated by local, state, and federal laws. These laws are designed to ensure that hazardous materials do not result in a gradual increase in toxins in the environment. For each of the cumulative projects under consideration, various project-specific measures would be implemented (as necessary) as a condition of development approval to mitigate risks associated with exposure to hazardous materials. For these reasons, the housing element update in combination with other cumulative projects would not result in a significant cumulative hazards and hazardous materials impact and this cumulative impact would be *less than significant*.

Energy

ENVIRONMENTAL SETTING²⁷²

The SFPUC and PG&E provide electric service and PG&E supplies natural gas within San Francisco. As explained in more detail below, the SFPUC uses PG&E’s overhead lines for electric service.

With a relatively mild Mediterranean climate and strict energy-efficiency and conservation requirements, California has one of the lowest energy consumption rates in the country. According to the Department of Energy, California’s per capita energy consumption (i.e., 197.8 million British thermal units [BTUs]) ranked 50th in the nation as of 2019.²⁷³ California and its residential uses consume 31 percent less energy than the national average.²⁷⁴

PG&E provides natural gas within an area of 70,000 square miles in Northern and Central California, including San Francisco. PG&E’s service area extends north to south from Eureka to Bakersfield and east to west from the Sierra Nevada to the Pacific Ocean. PG&E purchases gas from a variety of sources, including other utility companies.

San Francisco is located in a coastal climate zone (Climate Zone 3 in the Title 24 climate zone designation mapping). In 2019, PG&E delivered approximately 229 million therms of natural gas to San Francisco, with about

²⁷² For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

²⁷³ U.S. Energy Information Administration, *Table C14—Energy Consumption Estimates per Capita by End-Use Sector, Ranked by State, 2019*, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/rank_use_capita.html&sid=US, accessed July 28, 2021.

²⁷⁴ U.S. Energy Information Administration, *Household Energy Use in California, 2009*, http://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/CA.pdf, accessed July 28, 2021.

58 percent, or approximately 133 million therms, sold to residential customers and 42 percent, or 96 million therms, sold to nonresidential customers.²⁷⁵ In addition, approximately 5,632 million kilowatt-hours (kWhs) of electricity were delivered to San Francisco in 2019, with about 26 percent, or approximately 1,476 million kWhs, sold to residential customers, and 74 percent, or 4,155 million kWhs, sold to nonresidential customers.²⁷⁶

The SFPUC is San Francisco's municipal power utility, and it provides electric service to over 380,000 residential and business customers in the city through the CleanPowerSF program.²⁷⁷ CleanPowerSF allows customers to enroll in electricity programs that provide a larger percentage of energy use from renewable energy resources. CleanPowerSF allows customers to choose between two different electricity product operations: Green Service, which contains at least 50 percent renewable resources, and Supergreen Service, which contains 100 percent renewable resources as electricity resources.²⁷⁸ The Hetch Hetchy Power System, which is owned and operated by the SFPUC, supplies energy to all of San Francisco's municipal facilities and customers. The system operates three hydroelectric powerhouses that generate a combined total of nearly 400 megawatts.²⁷⁹ This electricity is transmitted to San Francisco along PG&E-owned transmission lines. Within San Francisco, the SFPUC also generates approximately 10 megawatts of renewable energy from 23 solar arrays and a biogas cogeneration facility.²⁸⁰

REGULATORY FRAMEWORK

This section describes the regulatory framework for energy, including policies and regulations applicable to energy resources. State policies and regulations relevant to energy include Renewable Energy Standards, the Clean Energy and Pollution Reduction Act, the 100 Percent Clean Energy Act of 2018, and the California Green Building Standards Code.

In 2002, California established its Renewables Portfolio Standard,²⁸¹ with the goal of increasing the percentage of renewable energy in the state's electricity mix. Specifically, renewable energy would account for 20 percent of retail sales by 2010. In 2006, this goal was codified in the Renewable Energy: Public Interest Energy Research, Demonstration, and Development Program. Under the provisions of this bill, investor-owned utilities were required to generate 20 percent of their retail electricity from qualified renewable energy technologies by the end of 2010. In 2008, Executive Order S-14-08 was signed into law, requiring retail sellers of electricity to derive 33 percent of their energy from renewable sources by 2020.

²⁷⁵ California Energy Commission, *Gas Consumption by County*, 2019, <http://www.ecdms.energy.ca.gov/gasbycounty.aspx>, accessed July 28, 2021.

²⁷⁶ California Energy Commission, *Electricity Consumption by County*, 2019, <https://ecdms.energy.ca.gov/elecbycounty.aspx>, accessed October 27, 2021.

²⁷⁷ CleanPowerSF, *CleanPowerSF, 2021*, <https://www.cleanpowersf.org/>, accessed October 27, 2021.

²⁷⁸ CleanPowerSF, *Residents*, 2021, <https://www.cleanpowersf.org/residential>, accessed October 27, 2021.

²⁷⁹ San Francisco Public Utilities Commission, *The Hetch Hetchy Power System*, 2018, <https://sfwater.org/index.aspx?page=391>, accessed July 28, 2021.

²⁸⁰ San Francisco Public Utilities Commission, *Solar Installations*, 2021, <https://sfpub.org>, accessed July 28, 2021.

²⁸¹ The Renewables Portfolio Standard is one of California's key programs for promoting renewable energy use in the state. The program establishes continuous procurement of renewable energy requirements for load-serving entities with the State of California.

The Clean Energy and Pollution Reduction Act of 2015 require the following by 2030: 1) to achieve a Renewables Portfolio Standard of 50 percent and 2) to double statewide energy efficiency savings in natural gas and electricity end uses. To help meet these provisions, the Clean Energy and Pollution Reduction Act of 2015 requires large utilities to develop and submit integrated resource plans that detail how they will reduce GHG emissions and increase the use of clean energy resources while meeting customer needs. The 100 Percent Clean Energy Act of 2018 builds on the Clean Energy and Pollution Reduction Act and increases the 2030 Renewables Portfolio Standard target set in the Clean Energy and Pollution Reduction Act to 60 percent and requires a Renewables Portfolio Standard of 100 percent by 2045.

CALGreen (part 11, title 24) was adopted as part of the state building code (24 CCR). CALGreen, which applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings, required energy- and water-efficient indoor infrastructure to be installed in all new projects, beginning January 1, 2011. CALGreen also required newly constructed buildings to develop a waste management plan and divert at least 50 percent of the construction materials generated during project construction.

In December 2021, the U.S. EPA issued the Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards and it took effect on February 28, 2022.²⁸² The final rule is expected to result in a projected industry-wide fuel economy of 40 miles per gallon by 2026, an approximately 25 percent increase over the previous standard.

The current Building Energy Efficiency Standards were adopted in 2019 and took effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy than homes constructed under the 2016 standards, while nonresidential buildings will use about 30 percent less energy. Later standards are expected to require zero net energy for new commercial buildings.

Local regulations applicable to energy resources include the green building code, Better Roofs Ordinance, All-Electric New Construction Ordinance, and the TDM program.

San Francisco adopted a green building code in 2008; in 2010, it adopted CALGreen but with modifications. The current code is the 2019 San Francisco Green Building Code, which combines all mandatory elements from the 2019 CALGreen regulations as well as stricter local requirements. Applicants who apply for a building permit between January 1, 2020, and December 31, 2022, must conform to the 2019 green building code. Applicants who apply for a permit after December 31, 2022, will be subject to the next iteration of the green building code. The 2019 green building code requires building permit submittals to show that they meet the compliance margin required by the applicable rating system and the California Building Energy Efficiency Standards in effect at the time of permit submittal. California Building Energy Efficiency Standards documentation must be prepared using software from the California Energy Commission's list of Approved Computer Programs for the Building Energy Efficiency Standards. Buildings that meet a LEED standard for Building Design and Construction or LEED standard for Core and Shell must prepare and submit all standard documentation required by the

²⁸² U.S. Environmental Protection Agency. 2022. *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026*. <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions#additional-resources>. Accessed February 16, 2022.

California Energy Commission to demonstrate compliance with the California Building Energy Efficiency Standards (title 24, part 6) in effect on the date of permit application.

Effective January 1, 2017, San Francisco became the first U.S. city to mandate solar and living roofs on most new construction through the Better Roofs Ordinance. The ordinance requires that 15 percent of the roof space on most new construction is solar, 30 percent of the roof space is a living roof (i.e., green or vegetated roof), or installing a combination of both solar and living roof. The Better Roofs ordinance applies to all projects proposing new construction that meet all of the following requirements: (1) nonresidential with a gross floor area of 2,000 square feet or more or residential of any size; (2) have 10 or fewer occupied floors; and (3) apply for a site permit or building permit on or after January 1, 2017.

Building code section 106A.1.17.1, also known as the All-Electric New Construction Ordinance, requires application for all permits submitted after June 1, 2021, to construct new buildings to be designed and constructed such that all space conditioning, water heating, cooking, and clothes drying systems are all-electric, and the installation of infrastructure, piping systems, or piping related to the distribution of natural gas or propane to such uses is prohibited. The ordinance allows limited installation of gas piping systems for commercial food preparation, and in isolated cases, if building all-electric is determined to be physically or technically infeasible after all other options are exhausted.

On August 4, 2016, the planning commission first adopted the TDM program standards. The TDM program requires certain new development projects to incorporate “design features, incentives, and tools” intended to reduce VMT (section 169). Development projects must choose measures from a menu of options to develop an overall TDM plan. Some options in the menu overlap with requirements elsewhere in the planning code (e.g., bicycle parking, car-share parking). Each development project’s TDM plan require routine monitoring and reporting to the department to demonstrate compliance.

ENVIRONMENTAL IMPACTS

This section describes the impact analysis related to energy associated with implementation of the proposed action. This section also describes the methods used to determine the impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts, if necessary, accompany the discussion of each identified significant impact.

Significance Criteria

The proposed action would have a significant effect if it would:

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

Approach to Analysis

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

With the anticipated buildout of 50,000 additional housing units by 2050, the types of future development consistent with the housing element update would depend on local economic conditions, market demand, and other financing considerations. To estimate energy consumption from future construction activities, this analysis relies on energy outputs developed as part of the environmental review for prior residential projects in San Francisco. These projects represent different types of residential buildings that are anticipated to be constructed in the future consistent with the proposed action and are presented in this analysis as a range of energy use on a per unit basis. The per unit construction-related energy consumption was calculated for buildings based on review of similar projects that have undergone environmental review and would be consistent with the housing element.

Energy consumption associated with operation of future development consistent with the proposed action would include the use of electricity and fuel for mobile sources (i.e., vehicles). Energy consumption through use of mobile vehicles (i.e., gasoline and diesel) was characterized using VMT data generated for the proposed action. Per unit operational electricity consumption was quantified using data from the San Francisco Communitywide Greenhouse Gas Inventory. The total amount of electricity used in the calculations accounts for residential electricity consumption provided by both PG&E and CleanPowerSF, the two energy providers in the city. In addition, to account for the all-electric new construction ordinance, the data provided on existing residential natural gas use was converted to kWh as future developments would be all-electric, and thus would increase future electricity use proportionally. Further, the same percentage (i.e., 14 percent) of electricity currently lost through distribution and transmission activities was included as part of the total amount of electricity consumed.

Future development consistent with the housing element update could directly affect energy resources by replacing existing residences and businesses or providing additional housing in the city. All future construction

would be subject to building permit review and would be reviewed for conformance or consistency with the building code requirements, including the all-electric new construction ordinance. In addition, future construction subject to the Better Roofs Ordinance and TDM program would be reviewed for consistency with ordinance and program requirements, respectively. This analysis considers to what extent anticipated future development would generate a demand for energy and whether such a demand would be wasteful.

Impacts and Mitigation Measures

Impact EN-1: The proposed action would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. (*Less than Significant*)

Future development consistent with the housing element update would increase the demand for energy resources in the city as discussed below.

Construction

Natural gas and electricity use are not substantial sources of energy used during construction. Energy-consuming construction activities associated with the housing element update would primarily include demolition, grading, excavation, utility installations, foundation work, paving, and building construction. Therefore, construction of future development consistent with the housing element update would result in a temporary increase in demand for energy resources.

Approximately 150,000 housing units are projected to be constructed under the housing element update by 2050, an increase of approximately 50,000 housing units above the 2050 environmental baseline. Using quantitative energy calculations from prior development projects, it is anticipated that on a per housing unit basis, construction activities associated with future development would require anywhere between approximately 125 and 431²⁸³ gallons of diesel fuel to be consumed by off-road construction equipment as well as between approximately 112 and 150 gallons of diesel fuel and approximately 28 and 220 gallons of gasoline to be consumed by vehicles for on-road trips related to construction. The increase in energy demand associated with construction of an additional 50,000 housing units over an approximately 30-year period consistent with the proposed action would be considered a small, temporary increase, occurring only during construction. The additional 50,000 housing units anticipated as an indirect result of the proposed action would not be constructed all at once. It is anticipated that the proposed action would result in the construction of an average of approximately 5,000 housing units per year through 2050. For comparison, approximately 3,400 units per year on average would be constructed through 2050 under environmental baseline conditions; therefore, the proposed action would result in 1,600 more housing units constructed per year on average over the next 30 years compared to 2050 environmental baseline conditions.

²⁸³ The per unit range of off-road diesel fuel consumption was calculated based on outputs in the 3700 California Street Project, 469 Stevenson Street Project, and 3333 California Street Mixed-Use Project EIRs. The range of on-road diesel consumption and on-road gasoline consumption was calculated based on inputs provided in the 469 Stevenson Street Project and 3333 California Street Mixed-Use Project.

Compared to other states, and the country as a whole, construction projects in California, including the San Francisco Bay Area, use the most energy-efficient construction equipment available to meet state and local goals for criteria air pollutant and GHG emissions reductions. Therefore, construction activities associated with the housing element update would not result in inefficient, wasteful, or unnecessary consumption of energy resources. This impact would be *less than significant*, and no mitigation measures are necessary.

Operation

The operation of future development consistent with the housing element update would consume energy. In accordance with the all-electric new construction ordinance, future development consistent with the housing element update would not consume natural gas or propane during operation. Energy consumption would be in the form of electricity to power the housing units as well as diesel and gasoline to power vehicles.

The estimated electricity use associated with operation of the 50,000 additional housing units under the proposed action as compared to the 2050 environmental baseline would be approximately 696,350,000 kWh total.^{284,285} As discussed under Impact TR-5 in Section 4.4, Transportation and Circulation, depending on the year and type of land use, per capita VMT anticipated in San Francisco as a result of the proposed action would be between 47 and 53 percent below the regional average, which is a substantially greater reduction than the 15 percent threshold. Because the proposed action would meet this VMT threshold on a citywide level, transportation emissions, and therefore energy consumption in the form of mobile vehicle diesel and gasoline consumption, would not be significant. Further, fleet average fuel efficiency per vehicle mile is anticipated to increase substantially between 2022 conditions and 2050 as a result of vehicle turnover that results in more fuel- or energy-efficient vehicles and an increasing share of hybrid and electric vehicles.

Specific to San Francisco, new construction is required to comply with the city's TDM program requirements and electric vehicle infrastructure requirements. The planning code requires certain new development projects to incorporate "design features, incentives, and tools" to reduce VMT (section 169). Both the TDM and electric vehicle infrastructure requirements are reviewed for compliance during the permit review process by the department. Compliance with these requirements would reduce the proposed action's transportation-related consumption of gasoline and diesel fuel.

As described in more detail below, development under the housing element update would be required to comply with all applicable city and state green building measures, as required by CCR title 24, part 6, the state building code, and part 11, CALGreen, which would reduce the demand for energy resources by incorporating sustainability features that would promote energy efficiency and increase reliance on renewable energy sources. Furthermore, future development projects would be subject to the energy and water efficiency standards in

²⁸⁴ The total amount of electricity provided accounts for residential electricity inputs provided by PG&E and CleanPowerSF, the two energy providers in the city. (Data SF, *San Francisco Communitywide Greenhouse Gas Inventory*, <https://data.sfgov.org/Energy-and-Environment/San-Francisco-Communitywide-Greenhouse-Gas-Invento/btm4-e4ak>, accessed September 1, 2021.)

²⁸⁵ To account for the all-electric new construction ordinance, existing residential natural gas use was converted to kWh as any residential natural gas use would be converted to electricity use for future developments, and thus would increase future electricity use proportionally. In addition, the same percentage (i.e., 14 percent) of electricity currently lost through distribution and transmission activities was applied to the natural gas that would be converted to electricity use and included as part of the total amount of electricity consumed.

effect at the time the projects are proposed; such standards are likely to become increasingly stringent over the coming years. Therefore, the housing element update would not result in wasteful, inefficient, or unnecessary consumption of energy resources during operation because future development consistent with the housing element update would be designed to comply with current energy and efficiency standards. This impact would be *less than significant*, and no mitigation measures are necessary.

Impact EN-2: The proposed action would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (*Less than Significant*)

Throughout the past 15 years, several federal, state, and citywide policies and measures have been enacted to promote energy efficiency and reduce current demands on non-renewable resources. Public Resources Code chapter 568, statutes of 2002, required the California Energy Commission to develop an integrated energy plan biannually pertaining to electricity, natural gas, and transportation fuels. The federal Energy Policy Act of 2005 sought to reduce reliance on non-renewable energy resources and provided incentives to reduce demand on such resources. For example, pursuant to the act, consumers and businesses could receive federal tax credits to buy fuel-efficient appliances and other products, purchase hybrid vehicles, construct energy-efficient buildings, or improve the energy efficiency of commercial buildings. In addition, tax credits were available for the installation of qualified fuel cells, stationary micro-turbine power plants, and solar power equipment.

California's Building Energy Efficiency Standards govern all aspects of building construction, including standards that mandate the incorporation of energy efficiency measures in new construction. Since 1977, the building efficiency standards, along with standards for energy efficiency in appliances, have contributed to reductions in electricity and natural gas use and costs in California. The standards are updated every three years to incorporate new energy-efficiency technologies. The latest update to the title 24 standards, effective January 1, 2020, reflects the California Building Standards Commission–approved 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings.²⁸⁶ The standards regulate the energy consumed in buildings for heating, cooling, ventilation, water heating, and lighting. Title 24 is implemented through the local planning and permit process. Anticipated future growth consistent with the proposed action would adhere to the above regulations and standards to substantially reduce energy and fuel use during construction as well as operation.

San Francisco adopted the green building code in 2008; in 2010, it adopted CALGreen but with modifications. The current code is the 2019 green building code, which combines all mandatory elements from the 2019 CALGreen regulations as well as stricter local requirements.²⁸⁷ The 2019 green building code requires building permit submittals to show that they meet the compliance margin required by the applicable rating system and the California Building Energy Efficiency Standards in effect at the time of permit submittal.

Future development consistent with the housing element update would increase energy demand in San Francisco. However, such future development would be urban infill located in an area with a low VMT per capita.

²⁸⁶ California Energy Commission, *Building Energy Efficiency Standards*, 2019, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>, accessed August 4, 2021.

²⁸⁷ City and County of San Francisco, *AB-093 Implementation of Green Building Regulations*, updated April 1, 2021, <https://sfdbi.org/sites/default/files/AB-093.pdf>, accessed August 4, 2021.

Further, the housing element update policies would direct new housing near transit infrastructure. In addition, future development projects consistent with the housing element update would be subject to the energy and water efficiency standards in effect at the time the projects are proposed. Therefore, the housing element update would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be *less than significant*, and no mitigation measures are necessary.

CUMULATIVE IMPACTS

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-EN-1: The proposed action, in combination with cumulative projects, would not result in a significant cumulative impact on energy. (*Less than Significant*)

Development, including that associated with future projects, rely on energy resources and would contribute to ongoing increases in demand for energy. As discussed previously, the 100 Percent Clean Energy Act of 2018 obligates utilities to supply 100 percent carbon-free electricity by 2045. Both PG&E and SFPUC are projected to meet the Act's new goal, which calls for 60 percent renewable energy by 2030, ahead of schedule. Similarly, the Pavley standards, as discussed under "Greenhouse Gas Emissions", above, are expected to increase average fuel economy to roughly 54.5 miles per gallon by 2025, thereby lowering the demand for fossil fuels, such as diesel and gasoline. In December 2021, the U.S. EPA finalized the national greenhouse gas emissions standards rule, which is expected to result in a projected industry-wide fuel economy of 40 miles per gallon by 2026, an approximately 25 percent increase over the previous standard.²⁸⁸

Therefore, it is anticipated that future development requiring energy use will become more efficient and less wasteful over time.

As stated above, the estimated electricity use associated with the operation of the 50,000 additional housing units under the proposed action as compared to the 2050 environmental baseline would be approximately 696,350,000 kWh total. The energy efficiency of future buildings and vehicles would be subject to increasingly robust regulations over time to meet the state's renewable energy and efficiency mandates. Given this, it is likely

²⁸⁸ U.S. Environmental Protection Agency, *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026*, 2022, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions#additional-resources>, accessed February 16, 2022.

that energy use on a per unit basis would decrease under the proposed action. Further, projects developed in the city, including anticipated future growth under the proposed action, would be subject to the federal, state, and local energy and water efficiency standards in effect at the time the projects are proposed, as applicable. Conformance with the requirements, as well as adherence to state or local plans for renewable energy or energy efficiency, would not result in significant cumulative impacts related to the use of energy resources. Because the city is almost entirely built out, future projects would be infill projects located in energy-efficient areas already serviced by existing energy infrastructure. Therefore, the housing element update in combination with cumulative projects would not result in a significant cumulative energy impact. The cumulative impact on energy would be *less than significant*.

Not Applicable

San Francisco does not contain any mineral resources that are of value to the state, regional, or local level; prime farmland or other agricultural resources; or forest resources; and is not located in a wildfire hazard zone. Therefore, the mineral resources, agricultural and forest resources, and wildfire topics are not applicable to the proposed action and are not discussed further in this EIR.

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4.2 Cultural Resources

This section of the environmental impact report (EIR) analyzes potential impacts on cultural resources, which refers to sites, objects, buildings, structures, burials, districts, and cultural landscapes, as a result of the proposed action and cumulative conditions. The analysis assesses the potential for the proposed action to result in reasonably foreseeable cultural resources impacts. These impacts would occur as a result of future actions that would implement the goals, policies, and actions of the proposed housing element update (i.e., future development consistent with the proposed action). Cultural resources can be classified as built-environment resources, archeological resources, or human remains. *Built-environment resources* generally refer to above-ground constructed and landscape features that support an understanding of human history through historical, social, cultural, aesthetic/design, or construction qualities. Built-environment resources—which are sometimes also called architectural resources, built resources, or other similar terms—include buildings, structures, objects, and districts, which are categories subsequently defined under “Regulatory Framework,” below. *Archeological resources* generally refer to deposits, structural features, and objects below ground. Human remains are also addressed in this section. Some archeological sites may also be considered tribal cultural resources as defined in Section 4.3, Tribal Cultural Resources. Information supporting this analysis of cultural resources impacts is included in Appendix F of this EIR, including the archeological sensitivity assessment prepared for the proposed action.¹

As defined in the CEQA Guidelines, the term *historical resource* refers to culturally and/or historically significant buildings, structures, objects, sites, and districts that have historical, Native American, architectural, archeological, cultural, or scientific importance. Cultural resources qualify as historical resources by being listed in or eligible for listing in the California Register of Historical Resources (California register), listed in a local historical resource register, identified as significant in a qualifying local survey, or is otherwise deemed important by a lead agency. The department uses the equivalent term *historic resource* to refer to significant cultural resources. In this section, the term *built-environment historic resource* refers to any built-environment resource that meets the definition of a historical resource contained in CEQA section 21084.1 or Guidelines section 15064.5(a)(3). Archeological resources can also meet the CEQA definition of a historical resource or unique archeological resource as defined in CEQA Guidelines section 21083.2. This section discusses the regulatory framework, environmental setting, environmental impacts, and mitigation measures for built-environment resources, archeological resources, and human remains. Impacts on tribal cultural resources are evaluated in Section 4.3, Tribal Cultural Resources.

¹ ICF, *San Francisco Housing Element Update 2022 Archeological Sensitivity Assessment*, Environmental Case Number 2019-016230ENV, 2022. See Appendix F.2 of this EIR.

Regulatory Framework

FEDERAL

The proposed action does not involve federal funding or permitting and is not subject to review under federal preservation law. However, the National Register of Historic Places (national register) and federal guidelines related to the treatment of cultural resources are relevant to the definition and identification of significant cultural resources.

A resource listed in or formally determined eligible for listing in the national register automatically is listed in the California register and therefore meets CEQA's definition of a historical resource. The sections below summarize the relevant federal regulations and guidelines.

National Historic Preservation Act and National Register of Historic Places

Built-environment and archeological resources are protected through the National Historic Preservation Act (16 United States Code [U.S.C.] 470f). The National Historic Preservation Act requires project review for effects on national register-listed or national register-eligible historic properties only when projects involve federal funding or permitting or occur on federal land, known as section 106 review; therefore, it is not applicable to discretionary actions at the municipal level. However, the National Historic Preservation Act establishes the national register, which provides a framework for resource evaluation and informs the process of determining impacts on historic resources under CEQA.

The national register is the nation's official inventory of significant historic properties, which includes built-environment and archeological resources. Administered by the National Park Service, the national register includes resources falling the following classes:

- *Buildings* are created principally to shelter any form of human activity;
- *Structures* are made usually for purposes other than creating human shelter;
- *Objects* are primarily artistic in nature or relatively small in scale and simply constructed. Although it may be, by nature or design, movable, the object is associated with a specific setting or environment;
- *Sites* are locations of significant events, prehistoric or historic occupations or activities, or a building or structure that possess historic, cultural, or archeological value regardless of the value of any existing structure;
- *Districts* possess a significant concentration, linkage, or continuity of sites, buildings, structures, or objects that are united historically or aesthetically by plan or physical development.²

Historic districts are multi-component resources that typically contain both contributing and non-contributing elements. *Contributing* elements are those buildings, structures, objects, and/or sites that directly support the

² National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, U.S. Department of the Interior, Washington, D.C., 1995, 4-5.

historic associations or architectural/construction characteristics for which a district is significant. Contributing elements may themselves not have sufficient historical value or integrity to support individual eligibility. The elements that contribute to a historic district can be built and/or archeological in nature. *Non-contributing* elements are properties within the boundary of a district that may not have been associated with or present during the period of significance, or have experienced substantial alterations, disturbances, additions, or other changes that limit their link to the district's significant historic context.

Cultural landscapes are a type of property that is in addition to the primary categories specified by the National Park Service. Cultural landscapes are often classified as historic districts for the purposes of documentation and evaluation. Like districts, cultural landscapes are multi-component resources. They can be physically expansive; yet, they are typically distinguished by the presence of cultural and natural resources that are “associated with a historic event, activity, or person” or they exhibit other cultural or aesthetic values.³

The national register recognizes resources that possess historic, architectural, engineering, archeological, or cultural significance at the national, state, or local level. The following national register criteria are defined in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*:

- Criterion A (Event): Properties associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B (Person): Properties associated with the lives of persons significant in our past
- Criterion C (Design/Construction): Properties that embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or represent a significant distinguishable entity whose components lack individual distinction
- Criterion D (Information Potential): Properties that have yielded, or may be likely to yield, information important in prehistory or history⁴

In addition to meeting at least one of the four criteria above, an individual built-environment or archeological resource (i.e., building, structure, site, or object), or district must retain integrity, meaning that it must have the ability to convey its significance by retaining various combinations of the following seven aspects, or qualities:

- Location: The place where the historic property was constructed
- Design: The combination of elements that created the form, plans, space, structure, and style of the property
- Setting: The physical environment of the historic property, inclusive of the landscape and spatial relationships of the buildings
- Materials: The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form the historic property

³ Charles A. Birnbaum, Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment, and Management of Historic Landscapes, National Park Service, 1994, <https://www.nps.gov/tps/how-to-preserve/briefs/36-cultural-landscapes.htm>, accessed March 24, 2022.

⁴ National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, U.S. Department of the Interior, Washington, D.C., 1995, 2.

- Workmanship: Physical evidence of the crafts of a particular culture or people during any given period in history
- Feeling: The property's expression of the aesthetic or historic sense of a particular period of time
- Association: Direct link between an important historic event or person and a historic property

National Park Service guidance states that a resource must be more than 50 years of age, meet any one of the four eligibility criteria, and retain overall integrity in order to be eligible for listing in the national register. National register evaluation guidance, however, contains Criteria Consideration G, which specifies that a property that is less than 50 years old or has otherwise achieved significance within the past 50 years may be eligible if it is of "exceptional importance" within its appropriate historic context. Those properties not of exceptional importance may nonetheless become eligible for listing in the national register once they become 50 years old and are evaluated against the conventional significance threshold.⁵

Secretary of the Interior's Standards for the Treatment of Historic Properties

The secretary's standards provide guidance for reviewing projects that maintain, repair, restore, or adapt historic properties. The National Park Service has developed individual lists of standards for four different project types: preservation, restoration, reconstruction, and rehabilitation. Preservation and restoration refer to projects that maintain a property relative to a current or past state, whereas reconstruction refers to the process of using new materials to replicate a property's historic form and features that are no longer extant.⁶ Rehabilitation, which is the most common project type in continually evolving urban environments like San Francisco, refers to "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values." Developed by the National Park Service as a framework for reviewing certified rehabilitation tax credit projects, the secretary's standards have been adopted by local government bodies across the United States for reviewing proposed work on historic properties under local preservation ordinances. The secretary's standards provide a useful analytical tool for understanding and describing the potential impacts of changes to historic resources, including new construction inside or adjoining historic districts. The secretary's standards for rehabilitation are listed below.

- A property will be used as it was historically or be given a new use that maximizes the retention of distinctive materials, features, spaces, and relationships
- The historic character of the 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
- 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 history properties, will not be undertaken

⁵ National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, U.S. Department of the Interior, Washington, D.C., 1995, 4–5.

⁶ The secretary's standards for preservation, restoration, and reconstruction are available at: National Park Service, *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, 2021, <https://www.nps.gov/tps/standards.htm>, accessed January 3, 2022.

- Changes to a property that have acquired historic significance in their own right will be retained and preserved
- Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved
- Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new materials will match the old in composition, design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence
- 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
- Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken
- New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale, proportion, and massing to protect the integrity of the property and its environment
- New additions 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 will be unimpaired⁷

The department uses the secretary's standards as guidance during its environmental review to determine whether a project may cause a substantial adverse change to the significance of built-environment historic resources. Additionally, the secretary's standards inform department design guidelines and are used to evaluate proposed changes to article 10 and article 11 properties, as described below in the local regulations.

STATE

Relevant state regulations and programs include the sections of CEQA and the CEQA Guidelines related to the identification of significant historic resources, along with the thresholds for significant impacts. The discussion of state regulations also provides an overview of the California register, which establishes the evaluative criteria that the department uses to determine the significance of built-environment resources.

California Environmental Quality Act

Cultural resources, inclusive of built-environment resources, archeological sites, and human remains, are among the resource classes addressed in CEQA as "historical resources."⁸ CEQA requires a lead agency to consider the effects of a project on historical resources.

⁷ National Park Service, Standards for Rehabilitation, Technical Preservation Services, 2021, <https://www.nps.gov/tps/standards/four-treatments/treatment-rehabilitation.htm>, accessed March 24, 2022.

⁸ *Historical resources* can include built-environment resources as well as historic-period or pre-European contact Native American archeological sites.

CEQA Guidelines section 15064.5 provides specific guidance for determining the significance of impacts on historical resources (CEQA Guidelines section 15064.5(b)) and unique archeological resources (CEQA Guidelines section 15064.5(b) and CEQA section 21083.2).

Historical Resources

CEQA section 21084.1 and CEQA Guidelines section 15064.5(a) defines historical resources as a resource that falls into at least one of the following categories:

- A resource listed in, or determined by the State Historical Resources Commission to be eligible for listing in, the California register shall be considered to be historically significant (Public Resources Code section 5024.1; title 14 California Code of Regulations, section 4850 et seq.).
- A resource included in a local register of historical resources, as defined in Public Resources Code section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of Public Resources Code section 5024.1(g), shall 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.
- Any object, building, structure, site, area, place, record, or manuscript that 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 in the California register (Public Resources Code section 5024.1; title 14 California Code of Regulations, section 4852).

CEQA allows a lead agency to treat a cultural resource as a historical resource, as defined in Public Resources Code sections 5020.1(j) or 5024.1, even if does not meet the conditions listed above. The city's local historical resource registers, surveys, and review processes for evaluating whether a resource qualifies as a CEQA historical resource are described in the discussion that follows.

CEQA section 21083.2 defines a unique archeological resource as an object, artifact, or site that 1) contains information needed to answer important scientific research questions for which there is demonstrable public interest, 2) has a special and particular quality, such as being the oldest of its type or the best available example of its type, or 3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA section 21083.2 and CEQA Guidelines section 15064.5 provide definition and guidance for archeological sites and their treatment. Guidelines for the implementation of CEQA define procedures, types of activities, persons, and public agencies required to comply with CEQA. CEQA Guidelines section 15064.5(b) prescribes that project effects that would "cause a substantial adverse change in the significance of an historical resource" are significant effects on the environment. Substantial adverse changes include physical changes to both the historical resource and its immediate surroundings.

A substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Actions that would materially impair the significance of a historical resource, in turn, are any actions that would demolish or adversely alter the physical characteristics that convey the property's historical significance and qualify it for inclusion in the California register, the national register, or in a local register or survey that meets the requirements of Public Resources Code sections 5020.1(k) and 5024.1(g).

If an impact on a historical or archeological resource is significant, CEQA requires feasible measures to minimize the impact (CEQA Guidelines section 15126.4 [a][1]). Mitigation of significant impacts must lessen or eliminate the physical impact that the project would have on the resource. CEQA requires that all feasible mitigation be undertaken even if it does not mitigate impacts to less-than-significant levels. CEQA Guidelines section 15126.4(a)(1) states that an EIR shall describe feasible measures which could minimize significant adverse impacts.

In addition, CEQA Guidelines section 15064.5(b)(3) specifies that projects that comply with the secretary's standards, as outline above, would have a less-than-significant impact on historical resources. Projects that do not comply with the secretary's standards may or may not have a significant impact on the historical resource.

California Register of Historical Resources

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 indicating which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (Public Resources Code section 5024.1[a]). The California register criteria are based on the national register criteria described above (Public Resources Code section 5024.1[b]). To be eligible for the California register, a resource must be significant at the local, state, and/or federal level under one or more of the following evaluative criteria, as defined in Public Resources Code section 5024.1(c):

- Criterion 1 (Event): The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2 (Person): The resource is associated with the lives of persons important in our past;
- Criterion 3 (Design/Construction): The resource embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values; and
- Criterion 4 (Information Potential): The resource has yielded, or may be likely to yield, information important in prehistory or history.

As with the national register, a significant resource must possess integrity in addition to meeting the significance criteria to be considered eligible for listing in the California register. Consideration of integrity for evaluation of California register eligibility generally follows the definitions and criteria from National Park Service's National Register Bulletin Number 15, identified above.

Properties that are listed in or found eligible for listing in the California register are typically more than 50 years old. When acting as the CEQA lead agency, the department uses a threshold of 45 years when considering which built-environment resources warrant evaluation. The California register is less stringent than the national register with regard to the eligibility of resources that are less than 50 years old or have achieved significance within the past 50 years. Rather than requiring a resource to meet an exceptional importance threshold, the California register instead requires an evaluator to demonstrate that “sufficient time has passed to understand [a resource’s] historical importance,” as supported by scholarly research.⁹

Human Remains

The treatment of human remains must comply with the provisions of state laws and codes discussed below, which identify protocols to be followed upon discovery of human remains. Archeological resources may also contain human remains and human remains may be determined to be historic resources as defined in CEQA section 21084.1 and CEQA Guidelines section 15064.5(a) discussed above. CEQA Guidelines section 15064.5 and California Public Resources Code section 5097.98, summarized below, also provides the process and procedures for addressing the existence of, or probable likelihood, of Native American human remains, as well as the unexpected discovery of any human remains during implementation of a project. This includes consultations with appropriate Native American tribes. Based on Native American consultation, Native American human remains are also presumed to be tribal cultural resources, discussed in Section 4.3, Tribal Cultural Resources.

California Health and Safety Code 7050.5

California Health and Safety Code section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined if the remains are subject to the coroner’s authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The role of the coroner in San Francisco is performed by the Office of the Chief Medical Examiner.

California Public Resources Code Section 5097.98

California Public Resources Code section 5097.98 states that the Native American Heritage Commission, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Part 7050.5, shall immediately notify those persons (i.e., the most likely descendant) it believes to be descended from the deceased. With permission of the landowner or a designated representative, the most likely descendant may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The most likely descendant shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

⁹ California Office of Historic Preservation, *California Office of Historic Preservation Technical Assistance Series #6, California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register)*, Department of Parks and Recreation, Sacramento, CA, n.d. 3.

Native American Tribal Consultation

Refer to Section 4.3, Tribal Cultural Resources, for a description of the tribal notification efforts conducted by the city under existing law and pursuant to CEQA sections 21080.3.1, 21080.3.2, and 21082.3.

LOCAL

San Francisco General Plan

The city's commitment to historic preservation is codified in the preamble to the San Francisco General Plan (general plan), which establishes eight general plan priority policies. Priority Policy 7 addresses the city's desire to preserve landmarks and historic buildings.

The urban design element of the general plan provides additional policies that emphasize preserving notable landmarks and historic features, sensitively remodeling older buildings, and respecting the character of older buildings adjacent to new development.

- Policy 2.4: Preserve notable landmarks and areas of historic, architectural, or aesthetic value and promote the preservation of other buildings and features that provide continuity with past development.
- Policy 2.5: Use care in remodeling older buildings in order to enhance rather than weaken the original character of such buildings.
- Policy 2.6: Respect the character of older development nearby in the design of new buildings.

In addition, many area plans contain policies and goals related to preservation of historic resources. Examples include the Rincon Hill Area Plan, Central SoMa Plan, and Market & Octavia Area Plan Amendment.^{10,11,12} The department is currently in the process of preparing a Heritage Conservation Element of the general plan to identify policies for recognizing and protecting the city's tangible (i.e., built-environment) and intangible heritage.

San Francisco Historic Preservation Commission and San Francisco Planning Code Articles 10 and 11

The San Francisco Historic Preservation Commission (historic preservation commission) is a seven-member body that makes recommendations to the planning commission and board of supervisors regarding the designation of individual landmarks and historic districts. The commission approves certificates of appropriateness for individual landmarks and landmark districts designated under article 10 and approves permits to alter for individual properties and conservation districts listed under article 11. The historic preservation commission oversees and directs the survey of historic resources. The historic preservation

¹⁰ San Francisco Planning Department, Rincon Hill Area Plan, San Francisco General Plan, adopted August 2005, https://generalplan.sfplanning.org/Rincon_Hill.htm#RIN_PVN_6_1, accessed March 24, 2022.

¹¹ San Francisco Planning Department, Central SoMa Plan, San Francisco General Plan, adopted December 2018, https://generalplan.sfplanning.org/Central_SoMa_Plan.pdf, accessed March 24, 2022.

¹² San Francisco Planning Department, Market & Octavia Area Plan Amendment, San Francisco General Plan, adopted June 2020, https://generalplan.sfplanning.org/Market-and-Octavia-Area-Plan_2020-Update.pdf, accessed March 24, 2022.

commission reviews and comments on CEQA documents for projects that affect historic resources as well as projects that are subject to review under section 106 of the National Historic Preservation Act.

The San Francisco Historic Preservation Commission's responsibilities include identifying, designating, and protecting historic landmarks (including buildings, objects, and districts) from inappropriate alterations. Article 10 of the planning code contains regulations to implement the way the historic preservation commission exercises its authority. Article 11 of the planning code contains similar regulations and empowers the historic preservation commission to establish significant and contributory buildings, as well as conservation districts, in the C-3 Downtown Commercial zoning district. Article 11 therefore establishes a register of conservation districts and individual significant and contributing properties in San Francisco's downtown core. The department and historic preservation commission use the secretary's standards to evaluate proposed changes to buildings designated under articles 10 and 11.

The historic preservation commission also adopts resolutions that guide the department's policies and priorities regarding the designation and protection of significant cultural resources. The following two resolutions inform the cultural resources analysis in this EIR:

- Resolution 0746, EIR Preservation Alternatives Policy: Adopted by the historic preservation commission in 2015, resolution 0746 establishes a policy clarifying expectations for EIR alternatives for projects with significant impacts on historic resources. The resolution requires that alternatives presented in an EIR that identified significant impacts on historic resources will include a preservation alternative that meets most of the basic objectives of the project and avoids the significant historic resource impact. The department may also deem it appropriate for the EIR to present a partial preservation alternative, which would preserve some significant features of affected resources but would not reduce the project's historic resource impact under CEQA.¹³
- Resolution 1127, Centering Preservation Planning on Racial and Social Equity: Adopted by the historic preservation commission in 2020, resolution 1127 acknowledges and apologizes for past harms and structural inequalities in planning and historic preservation policies in San Francisco that continue to negatively affect San Francisco's American Indian, Black, and other communities of color. To redress these issues, the resolution provides recommendations to the department to develop proactive strategies to address structural and institutional racism. Resolution 1127 provides guidance to the department to update its historic preservation work program and resource allocation to prioritize racial and social equity. Resolution 1127 specifically directs the department to improve efforts in collaboration with community members to identify and safeguard aspects of tangible and intangible heritage associated with San Francisco's marginalized racial and social groups, including American Indian, Black, Latin/e/x, LGBTQ+, and Asian and Pacific Islander communities.¹⁴

¹³ San Francisco Planning Department, Historic Preservation Commission Resolution No. 0746, EIR Preservation Alternatives Policy, adopted March 18, 2015.

¹⁴ San Francisco Planning Department, Historic Preservation Commission Resolution No. 1127, Centering Preservation Planning on Racial and Social Equity, adopted July 15, 2020.

San Francisco Planning Code Section 101.1: Master Plan Priority Policies

Planning code section 101.1 requires the city to find a proposed project consistent and on balance with eight master plan priority policies. Priority policy 7, which is relevant to historical resources, establishes a priority policy that calls for landmarks and historic buildings to be preserved.

Residential Design Guidelines

Planning code section 311 specifies the city's residential design guidelines, which articulate expectations regarding the character of the built environment and are intended to promote design that will protect neighborhood character, enhancing the attractiveness and quality of life in the city. The guidelines address principles of urban design that will result in residential development that maintains cohesive neighborhood identity, preserves historic resources, and enhances the unique setting and character of the city and its residential neighborhoods. The guidelines also suggest opportunities for residential designs to further the city's goal of environmental sustainability.

Regarding historically and/or architecturally significant built-environment historic resources, the residential design guidelines present a series of considerations meant to inform projects proposing to alter residences that are listed in or eligible for listing in the national or California registers, or that have been identified as significant in local historic resource surveys. The special guidelines for historic resources provide additional guidance to ensure significant buildings' character-defining form, materials, finishes, and detailing are maintained, thus supporting a project's compliance with the secretary's standards.¹⁵

Environmental Setting

The generalized environmental setting of San Francisco, both past and present, is described in the sections that follow. The context provides the framework for discussions of Native American archeological resources, archeological resources of the historic period (in San Francisco, considered to begin at the arrival of the first Spanish explorers and settlers, in 1769), and built-environment resources.¹⁶ An account of the traditional lifeways and history of the Ohlone people of the San Francisco area is provided in Section 4.3, Tribal Cultural Resources. The context sheds light on the anticipated distribution and effects on archeological resources related to major land changes and settlement patterns. The context for the historic period also describes urban and residential development patterns in San Francisco after 1848 to support an understanding of the city's built-environment resource characteristics. The setting and history of San Francisco are discussed in detail in the archeological sensitivity assessment prepared for the proposed action (see Appendix F.2 of this EIR).

Following the historic-period context, this section introduces the 2050 environmental baseline, which represents the housing development that would continue to occur in San Francisco under the policies and implementing measures of the existing 2014 housing element. This section includes a discussion of San Francisco's built-

¹⁵ San Francisco Planning Department, *Residential Design Guidelines*, December 2003, <https://sfplanning.org/resource/residential-design-guidelines>, accessed: January 31, 2022.

¹⁶ The majority of known archeological resources of Native American origin in San Francisco predate the Spanish arrival. On this basis, these resources of Native American origin are often referenced as "prehistoric" or "precontact" resources; however, at the request of local Native American representatives, the department is moving away from using these terms.

environment resource setting, which considers the past investigations and ongoing efforts to identify built-environment historic resources. This discussion establishes the built-environment historic resources that are known as of 2021, the year for which the most recent applicable data are available, and presents a neighborhood-level forecast of the resources that may be identified through 2050. This section then describes San Francisco's archeological resource setting, which uses known archeological and geographical data from across the city to build a picture of where different types of archeological sites are expected to be located. Human remains are discussed as part of the archeological resource setting. The analysis of effects on built-environment resources references the 41 neighborhoods within San Francisco to identify where built-environment resource impacts may have a greater likelihood of occurring. A neighborhood scale of analysis acknowledges similarities in physical development patterns, social and cultural historic context, and built-environment character within a particular geographic area.

Based on geographical data, the archeological impacts analysis uses a planning district-level approach and identifies where different types of archeological sites have a greater likelihood of occurring. Each planning district in the city was reviewed in terms of landscape, geology, history, ethnography, existing building trends, and known Native American and historical archeological sites to identify the potential to encounter both known and undiscovered archeological resources, including human remains.

Figure 2-2, p. 2-4, Chapter 2, Project Description, shows the boundaries of the planning districts and neighborhoods that support both the environmental setting and environmental impacts discussions below. Appendix F.1, Table F-2, includes neighborhood summaries. Appendix F.2, Table 1, shows that some neighborhoods are divided among multiple planning districts.

OVERVIEW OF PALEOENVIRONMENT AND HISTORIC-PERIOD ENVIRONMENTAL SETTING

Human occupation of North America is thought to have started at the end of the Pleistocene epoch, as early as around 13,500 years ago.^{17,18,19}

The city is the northern end of the San Francisco Peninsula. The “spine” of the peninsula is one of several northwest/southwest-trending ridges that make up the Coast Range geomorphic province. The peninsula is flanked by the Pacific Ocean on the west, San Francisco Bay on the east, and the Golden Gate Channel, which connects the bay and the ocean, on the north. At elevations of less than 500 feet above sea level, the bedrock of the San Francisco Peninsula is overlain by the poorly consolidated Colma Formation, which ranges from 8,000 to 120,000 years old. The Colma Formation was formed during a period where sea levels rose and fell cyclically, resulting in beds of marine and terrestrial sediments, which were consolidated as sandstone. There are two widely recognized components of the Colma Formation. The older lower component formed between 120,000 and 80,000 years ago, before humans were present in the San Francisco Bay Area; therefore, the upper interface of this component is considered to be the point below which encountering archeological resources is unlikely.

¹⁷ Meltzer, Peopling of North America, in *Developments in Quaternary Science Volume 1: The Quaternary Period in the United States*, A.R. Gillespie, S.C. Porter, and B.F. Atwater (eds.), Elsevier, Amsterdam, The Netherlands, 2004.

¹⁸ Erlandson, One if by Land, Two if by Sea: Who Were the First Californians? in *California Prehistory: Colonization, Culture, and Complexity*, Terry L. Jones and Kathryn Klar, pp. 53–62, Walnut Creek, CA, Altamira Press, 2007.

¹⁹ Braje et al., Were Hominins in California ~130,000 Years Ago? In *Paleoamerica* 1(3):200–202, 2017.

The younger upper component formed between 65,000 and 8,000 years ago has sometimes been found to interbed with younger estuarine and bay muds along late Pleistocene and early Holocene shorelines.^{20,21,22}

At the end of the last major glaciation, during the late Pleistocene epoch (between approximately 11,000 and 17,000 years ago), sea levels were in the range of 325 to 425 feet lower than at present, exposing the marine coastline more than 20 miles west of its current location, at the edge of a broad coastal plain; San Francisco Bay did not exist.^{23,24} The basin now occupied by the bay instead was a broad river valley. During this period, when the coastal plain was exposed, alluvial sediments deposited along this plain were transported inland (east) by winds and formed a large sand dune sheet that extended from the western shore of the San Francisco Peninsula to the Oakland Hills.^{25,26} Because these dune sheets formed during the period for which there is evidence of human occupation of North America, they retain the potential to contain buried archeological resources. Sand dune migration across the peninsula from the ocean coast to the bay shore created vast dune fields that covered virtually all of the lowlands around San Francisco's hills, with dunes as much as 40 feet high, although these were interspersed with small ponds, willow groves, patches of chapparal and oak, and possibly a few redwood groves.

As sea levels rose during the early to middle Holocene epoch (around 12,000 to 5,000 years ago), the marine coastline rapidly moved inland (eastward), rapidly filling the San Francisco Bay (see Appendix F.2, Figure 4, of this EIR).^{27,28,29} It is during this period of rapid sea-level rise that humans are believed to have first settled in the San Franciscan Valley. However, archeological evidence of Native American use or occupation in the valley or on the shores of the growing bay would have been inundated, then buried under bay-bottom sediments. In San Francisco, thus far only one human interment and one shell midden deposit that date to this period have been

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- ²⁰ Schlocker et al., *Geology of the San Francisco North Quadrangle, California*, Geological Survey Professional Paper 782, scale 1:24,000, 109 pp., 1974.
- ²¹ Atwater, History, Landforms, and Vegetation of the Estuary's Tidal Marshes, in *San Francisco Bay: The Urbanized Estuary—Investigating into the Natural History of San Francisco Bay and Delta with Reference to the Influence of Man*, T.J. Conomos, A.E. Leviton, and M. Berson (eds.), pp. 347–386, San Francisco, CA, Pacific Division of the American Association for the Advancement of Science, 1979.
- ²² Peterson et al., Origins of Quaternary Coastal Dune Sheets in San Francisco and Monterey Bay, Central California Coast, U.S.A.: Reflecting Contrasts in Shelf Depocenters and Coastal Neotectonics, in *Journal of Coastal Research* 31(6):1317–1333, 2015.
- ²³ Atwater, History, Landforms, and Vegetation of the Estuary's Tidal Marshes, in *San Francisco Bay: The Urbanized Estuary—Investigating into the Natural History of San Francisco Bay and Delta with Reference to the Influence of Man*, T.J. Conomos, A.E. Leviton, and M. Berson (eds.), pp. 347–386. San Francisco, CA, Pacific Division of the American Association for the Advancement of Science, 1979.
- ²⁴ Sloan, San Francisco Bay, in *Geology of San Francisco and Vicinity*, 28th International Geological Congress Field Trip Guidebook 105, C. Wahrhaftig and D. Sloan (eds.), pp. 46–47, 1989.
- ²⁵ Peterson, C.D., E. Stock, J. Meyer, P. Kaijankoski, and D.M. Price, Origins of Quaternary Coastal Dune Sheets in San Francisco and Monterey Bay, Central California Coast, U.S.A.: Reflecting Contrasts in Shelf Depocenters and Coastal Neotectonics, in *Journal of Coastal Research* 31(6) 2015, pp. 1317–1333.
- ²⁶ Schlocker, J., *Geology of the San Francisco North Quadrangle, California*, Geological Survey Professional Paper 782, scale 1:24,000, 1974, 109 pp.
- ²⁷ Atwater, B.F., C. Hedel, and E. Helley, Late Quaternary Depositional History, Holocene Sea Level Changes, and Vertical Crustal Movement, Southern San Francisco Bay, California, in *U.S. Geological Survey Professional Paper No. 1014*, Washington, D.C., U.S. Government Printing Office, 1977.
- ²⁸ Helley, E.J., K.R. Lajoie, W.E. Spangle, and M.L. Blair, Flatland Deposits of the San Francisco Bay Region, California: Their Geology and Engineering Properties, and Their Import, in *United States Geological Survey Professional Paper 943*, 1979.
- ²⁹ Peterson, C.D., E. Stock, J. Meyer, P. Kaijankoski, and D.M. Price, Origins of Quaternary Coastal Dune Sheets in San Francisco and Monterey Bay, Central California Coast, U.S.A.: Reflecting Contrasts in Shelf Depocenters and Coastal Neotectonics, in *Journal of Coastal Research* 31(6) 2015, pp. 1317–1333.

discovered. Tidal marshes began to form along the margins of the San Francisco Bay and human settlement increased markedly as sea levels approached their near present-day elevation during the middle to late Holocene (around 4,000 years ago) (see Appendix F.2, Figure 5, of this EIR). On the east side of the San Francisco Peninsula, many Native American settlements were established around the marsh margins. During this same period, sand dunes began to form across the San Francisco Peninsula.

The arrival of the first non-native people in San Francisco, in the 1770s, while devastating in its effects on native populations, resulted in more subtle changes in the environmental setting. Over the subsequent 75 years, non-native plants were introduced, native vegetation management strategies were suppressed, and some creeks and springs were diverted for agricultural uses, which most likely resulted in substantial changes in the types of grassland cover on the peninsula. However, topographic alterations, such as mass grading or landfill, appear to have been very localized and limited during this period.

Starting in 1848, with the discovery of gold in the region, a large influx of people from around the world migrated to the San Francisco Peninsula. Over the next year, the population of San Francisco grew from fewer than 1,000 inhabitants to more than 25,000.³⁰ Increased demand for usable space along the waterfront of Yerba Buena Cove, and later of Mission Bay, led to widespread grading and landfilling over the next three decades.³¹ Land development also led to the leveling and stabilization of sand dunes on the eastern side of the peninsula (particularly north of Mission Creek) as the dunes were graded and eventually built over.

In addition to the intentional land reclamation activities occurring along the San Francisco shoreline, the marshes and tide flats of San Francisco Bay accumulated sediment rapidly, after the middle of the 19th century, because of a substantially increased sediment load carried into the bay from extensive hydraulic mining activities in the drainages of the San Joaquin and Sacramento rivers, which drain to the bay.³² Combined, these activities led to drastic changes in the shoreline, topography, and locations of fresh water on the San Francisco Peninsula.

NATIVE AMERICAN CULTURAL CHRONOLOGY FOR SAN FRANCISCO

A Native American cultural chronology for the San Francisco Bay Area has been developed over the course of a century of organized archeological survey work, from the foundational work of N.C. Nelson in 1906 to the present. Since the 1950s, archeological work in Marin, San Francisco, San Mateo, Alameda, and Contra Costa counties has refined the cultural sequence. The archeological work in those counties is discussed in more detail in the archeological sensitivity assessment prepared for the proposed action (see Appendix F.2 of this EIR).

³⁰ San Francisco Genealogy, *San Francisco History*, San Francisco Population, <https://www.sfgenealogy.org/sf/history/hgpop.htm>.

³¹ U.S. Coast Survey, *San Francisco & Vicinity*, Washington, U.S. Coast Survey, 1853, 1857.

³² Atwater, History, Landforms, and Vegetation of the Estuary's Tidal Marshes, in *San Francisco Bay: The Urbanized Estuary—In Investigating into the Natural History of San Francisco Bay and Delta with Reference to the Influence of Man*, T.J. Conomos, A.E. Leviton, and M. Berson (eds.), pp. 347–386. San Francisco, CA, Pacific Division of the American Association for the Advancement of Science, 1979.

Terminal Pleistocene (13,500–11,600 years Before Present)³³

Previously, it was thought that the earliest human inhabitants of North America were highly mobile terrestrial big game hunters.³⁴ However, an ever-growing body of evidence suggests that the Terminal Pleistocene in North America saw multiple cultural groups with various tool technologies and associated subsistence strategies.^{35,36} This period is not represented by any known site in the San Francisco Bay Area. Either the San Francisco Bay Area was not yet settled at this time, or factors such as sea-level rise, coastal erosion, and localized subsidence in coastal areas destroyed or obscured evidence of occupation during this period.³⁷

Early Holocene (11,600–7,700 years Before Present)

The Early Holocene culture of central California, including the San Francisco Bay region and extending south to Santa Barbara, has been characterized by semi-mobile hunter-gatherers who exploited a wide range of food resources from marine, lake, and terrestrial settings.^{38,39} The sample of Native American archeological sites dating to this period in the San Francisco Bay Area is very small and most likely represents an incomplete picture of local Native American land use. However, a recently discovered submerged site in Mission Bay that dates to the end of this period has provided evidence of the presence of people in San Francisco by this time and of the use of both shellfish and fish.⁴⁰

Middle Holocene (7,700–3,800 years Before Present)

The Middle Holocene in central California is characterized by a diverse range of habitation sites and artifact assemblages, which suggest higher population levels, more complex adaptive strategies, and longer seasonal occupations than those that took place during the Early Holocene. More than 30 San Francisco Bay Area archeology sites, many of which include burials, have produced radiocarbon dates that indicate occupation

³³ *Before Present*, as used in this section, is an archeological dating convention that is based on radiocarbon dating. Radiocarbon dating first came into archeological use around 1950. 1950 therefore is the accepted conventional dating baseline for radiocarbon-derived dates. “Before Present,” in this context, means “before 1950.” This means that as of 2022, each of these periods actually dates back an additional 72 years. However, these dates are only approximations for the periods described, and the timing of the cultural events during each period varies geographically and chronologically to some extent. The more refined dating of cultural periods is more critical for periods later in time, as noted under “Late Holocene,” below.

³⁴ Meltzer, Peopling of North America, in *Developments in Quaternary Science Volume 1: The Quaternary Period in the United States*, A.R. Gillespie, S.C. Porter, and B.F. Atwater (eds.), Elsevier, Amsterdam, The Netherlands, 2004.

³⁵ Beck and Jones, Clovis and Western Stemmed: Population Migration and the Meeting of Two Technologies in the Intermountain West, in *American Antiquity*, volume 75, No. 1, pp. 81–116, 2010.

³⁶ Braje et al., Were Hominins in California ~130,000 Years Ago? In *Paleoamerica* 1(3):200–202, 2017.

³⁷ Byrd et al., *Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, prepared for, R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA, 2010.

³⁸ Erlandson et al., One if by Land, Two if by Sea: Who Were the First Californians? in *California Prehistory: Colonization, Culture, and Complexity*, Terry L. Jones and Kathryn Klar (eds.), pp. 53–62. Walnut Creek, CA, Altamira Press, 2007.

³⁹ Morratto, Culture History of the New Melones Reservoir Area, Calaveras and Tuolumne Counties, California, in *Essays in California Archaeology: A Memorial to Franklin Fenenga*, W.J. Wallace and F.A. Riddell (eds.), Contributions of the University of California Archaeological Research Facility 60, Berkeley, CA, pp. 25–54, 1992.

⁴⁰ Personal communication, Sally Morgan, San Francisco Planning Department, September 8, 2021.

during this period.^{41,42,43,44,45,46,47} Only two sites and one isolate burial dating to this period have been found in San Francisco; all of these were found in submerged and deeply buried settings. Although San Francisco Bay Area populations at this time are believed to have been small and sparsely distributed, the lack of evidence of occupation at this time almost certainly is due at least in part to the environmental changes that formed the bay, which likely submerged and buried the earliest occupation sites along the shore of the encroaching bay.

Late Holocene (3,800 years Before Present)

There are more than 600 known archeological sites in the San Francisco Bay Area that date to the Late Holocene.⁴⁸ With this number of known sites, the subtleties of cultural change and variation are more apparent than in previous periods; therefore, the last approximately 4,000 years of history in the region are broken into sub-periods.

Early Period of the Late Holocene (3,800–2,450 years Before Present)

The Early Period of the Late Holocene marks the establishment of a number of large shell mounds, or shell midden, sites around the San Francisco Bay, often clustered along the mouths of creeks near the bay shore. These represent substantial shellfish use and, often, substantial settlements. There is evidence of an extensive long-distance trade network having been established by the Early Period of the Late Holocene.⁴⁹

⁴¹ Meyer, *Geoarchaeological Study of the Marsh Creek Site (CA-CCO-18 and CA-CCO-548)*, Eastern Contra Costa County, California, Rohnert Park, CA, Anthropological Studies Center, Sonoma State University Academic Foundation, 2005.

⁴² Pohl, *The Archaeology of de Silva Island, CA-MRN-17*, Treganza Museum Publication 17, Tiburon Archaeological Research Group Publication 2, 2003.

⁴³ Wiberg, *Archaeological Investigations and Burial Removal at Sites CA-ALA-483, CA-ALA-483 Extension, and CA-ALA-555, Pleasanton, Alameda County, California*, San Francisco, CA, Holman and Associates, submitted to Davidon Homes, Walnut Creek, 1996.

⁴⁴ Cartier, *The Scotts Valley Site: CA-SCR-177, Santa Cruz, CA*, Santa Cruz Archaeological Society, 1993.

⁴⁵ Hildebrandt, *Archaeological Research of the Southern Santa Clara Valley Project: Based on a Data Recovery Program from Sites CA-SCL-54, CA-SCL-163, CA-SCL-178, CA-SCL-237, and CA-SCL-241 Located in the Route 101 Corridor, Santa Clara County, California*, Daniel, Mann, Johnson, and Mendenhall and San Jose State University, Los Angeles and San José, submitted to California Department of Transportation, District 4, San Francisco, report S-6369, 1983.

⁴⁶ Meyer and Rosenthal, *Archaeological and Geoarchaeological Investigations at Eight Prehistoric Sites in the Los Vaqueros Reservoir Area, Contra Costa County, Los Vaqueros Final Report No. 7*, prepared for the Contra Costa Water District, Concord, CA, Rohnert Park, CA, Anthropological Studies Center, Sonoma State University, 1997.

⁴⁷ Henn and Schenck, An Archaeological Analysis of Skeletal Material Excavated from the Civic Center of BART, in *Robert E. Schenck Memorial Archives of California Archaeology No. 11*, San Francisco, CA, 1970.

⁴⁸ The Late Holocene is the current geological epoch. The dates provided frame the period of Native American culture as represented by Native American archeological sites prior to European contact, which is generally considered to terminate roughly coincident with the arrival of the Spanish in San Francisco (that is, in 1769).

⁴⁹ Byrd et al., *Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, prepared for R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA, 2010.

Middle Period of the Late Holocene (2,050–900 years Before Present)

The Middle Period of the Late Holocene is characterized by increased settlement permanence, mound-building, and increasing social complexity and ritual elaboration.^{50,51} Carbon dating from nine sites within San Francisco suggests increased occupation of San Francisco Peninsula during this period.⁵²

Late Period of the Late Holocene (700–170 years Before Present)

The Late Period of the Late Holocene is the best-documented Late Holocene division throughout the greater San Francisco Bay Area. An increase in external trade relationships, increased social complexity, and diversified funerary practices are observed in sites from this period.⁵³

Virtually all of the known Native American sites in San Francisco are shell midden sites, sites with occupational debris that accumulated at locations where Native American groups either resided or gathered to process shellfish, near the shores of San Francisco Bay. Historically, Euro-Americans mined some of these deposits as sources of rich organic fertilizer and for other uses. Subsequent development often resulted in the mounds being graded or buried as the bay was raised and the land leveled for buildings and roads. This resulted in partial or complete destruction of many San Francisco Bay Area shell mounds, along with a loss of knowledge regarding the many shell-mound sites that once existed.^{54,55} However, some Native American sites in San Francisco had been encapsulated in moving dune sand long before historical development began, and thus have been preserved essentially intact. Many others, although damaged to some extent by historic activity or development, have nonetheless survived and retain substantial informational potential as well as cultural value.

NATIVE AMERICAN HISTORY AND CULTURAL AFFILIATION

The traditional territory of the Ohlone people extended along the coast from the northern tip of San Francisco Peninsula to a point just south of Carmel; in the East Bay and South Bay, their territory extended southward from both sides of Carquinez Strait to San Juan Bautista and eastward to Sunol Valley.⁵⁶ San Francisco was

⁵⁰ Lightfoot, Cultural Construction of Coastal Landscapes: A Middle-Holocene Perspective from San Francisco Bay, in *Archaeology of the California Coast during the Middle-Holocene*, J.A. Erlandson and M.A. Glassow (eds.), pp. 129–142, Los Angeles, CA, Institute of Archaeology, University of California, Los Angeles, 1997.

⁵¹ Lightfoot and Luby, Late Holocene in the San Francisco Bay Area: Temporal Trends in the Use and Abandonment of Shell Mounds in the East Bay, in *Catalysts to Complexity: The Late Holocene on the California Coast*, J. Erlandson and T. Jones (eds.), Los Angeles, CA, Institute of Archaeology, University of California, Los Angeles. pp. 263–281, 2002.

⁵² DeGeorgey, *Archaeological Research Design and Treatment Plan Van Ness Corridor Transit Improvement Project, City and County of San Francisco, California*, prepared for the San Francisco Municipal Transportation Authority, 2016, p. 25.

⁵³ Byrd et al., *Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, prepared for R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA, 2010.

⁵⁴ Jones & Stokes, *Final Archaeological Survey Report, Bayview Transportation Improvements Project*, prepared for City and County of San Francisco, Department of Public Works, San Francisco, CA, and California Department of Transportation, District 4, Local Assistance, Oakland, CA, 2007.

⁵⁵ Byrd et al., *Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, prepared for R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA, 2010.

⁵⁶ Levy, Costanoan, in California, R.F. Heizer, ed., *Handbook of North American Indians*, volume 8, Washington, D.C., Smithsonian Institution, 1978, pp. 485 and 486.

traditionally inhabited by the Yelamu people,⁵⁷ a subgroup of the Ramaytush language-speaking group of the Ohlone people. A discussion of the lifeways and history of the Yelamu Ohlone is provided in Section 4.3, Tribal Cultural Resources.

HISTORIC-PERIOD CONTEXT

Spanish and Mexican (Mission and Post-Mission) Periods (1776–1848)

In 1776, Juan de Bautista de Anza led a party that traveled from Monterey to San Francisco to select settlement locations—specifically selecting a site for a *presidio*, or military base, at Fort Point and a mission site at Arroyo de los Dolores. Spanish colonization translated into dramatic social upheaval and a demographic decline for the region’s native Ohlone inhabitants. Native American neophytes (i.e., mission converts) were subject to disruptions to their traditional settlement and subsistence patterns, physical punishment, new forms of European labor discipline, clerics’ efforts to eradicate native religion, and European disease.

The Spanish period ended in 1821/1822 when the government of Mexico gained independence from Spain and acquired current-day California. Fueled by anti-clerical sentiment, the Mexican government began secularizing the California missions in the 1830s and, within a decade, only a handful of Native America neophytes still lived at the mission. Furthermore, territorial governors granted vast tracts of land, including the lands that had been reserved for Native Americans in the mission system under Spanish law, to civilians for private cultivation and ranching. Rancho activities often included cultivating crops and raising cattle. However, hides and tallow became California’s main international trade commodities during the Mexican period.^{58,59,60} With secularization of the missions in the 1830s, a new class of Hispanic rancho landowners found a readily exploitable supply of labor in the Native Americans who were released from the forced labor of the Franciscan missions, discussed in more detail in Section 4.3, Tribal Cultural Resources.

The bayside village of Yerba Buena, a multicultural settlement of immigrants and small-scale harbor facilities along the shores of Yerba Buena Cove in what is now San Francisco’s Downtown, grew slowly during the 1830s and early 1840s. In 1839, acting at the request of the Mexican government, Swiss surveyor Jacques Vioget created the first plat of the settlement then called Yerba Buena. The original Vioget plat of San Francisco is bounded by north/south-running Kearny and Grant streets, and east/west-running Sacramento, Clay, Washington, Jackson, and Pacific streets. Massive sand dunes and dune fields between the village of Yerba Buena, the mission, and the Presidio impeded land travel to the small harbor at that time, but the sheltered cove and beach nonetheless

⁵⁷ Milliken, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA, Ballena Press, 1995, p. 260.

⁵⁸ Bean and Rawls, *California: An Interpretive History*, eighth edition, New York, NY, McGraw-Hill, 2002, p. 56, pp. 58–70, p. 72.

⁵⁹ Sandos, *Converting California: Indians and Franciscans in the Missions*, New Haven, CT, Yale University Press, 2004, pp. 11 and 12; pp. 108 and 109.

⁶⁰ JRP, *Historic-Era Context in Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, February, prepared by Brian F. Byrd, Philip Kaijankoski, Jack Meyer, and Adrian Whitaker of JRP; Rebecca Allen of Past Forward, Inc.; and Meta Bunse and Bryan Larson of JRP Historical Consulting, LLC, for the San Francisco Planning Department, San Francisco, CA, 2010, p. 33.

became the primary anchorage for the hide and tallow trade on the San Francisco Peninsula. In 1847, *alcalde* (mayor) Washington A. Bartlett, changed the name of Yerba Buena to San Francisco.

Mexico ceded the territories of Texas and California to the United States in 1848, following the Mexican-American War and the Treaty of Guadalupe Hidalgo.

San Francisco Urban and Residential Development, 1848-present

The United States' acquisition of California in 1848 roughly corresponded to the discovery of gold in the American River in 1848. San Francisco, one of the closest seaport to the gold fields, became a jumping-off point for the ensuing gold rush and underwent rapid population growth as a result. The settlement's residential and commercial development began at the shores of San Francisco Bay and Yerba Buena Cove. Residents initiated campaigns to fill Yerba Buena Cove to create more usable land at the waterfront, and their grading efforts began to level the bayshore dune fields and improve both access and drainage. The invention, in 1852, of steam-powered mechanical equipment that could rapidly excavate and relocate large quantities of sand, helped facilitate the movement of the sand from dunes in the current-day Financial District/South Beach neighborhoods to fill Yerba Buena Cove, level the eastern shoreline of the city, and improve drainage in developing areas. Rebuilding projects in the city during the 1850s eliminated the large sand dunes south of Market Street. Sand moving and leveling continued in the area into the 1870s.^{61,62,63,64}

As the city's population increased in the 1850s, residential development gradually pushed westward, initially via a plank toll road that connected what is now the South of Market (SoMa) district to Mission Dolores, and southward toward open land that had been used for agriculture and grazing. San Francisco's footprint during this period ran from the north end of the peninsula southward along what is now Divisadero Street into Eureka Valley (now known as the Castro District) as well as eastward through the Mission. Outside the downtown core, near the northeast waterfront, the most densely settled areas of the city included the Inner Mission, Rincon Hill and South Park, SoMa, Russian Hill, Pacific Heights, and parts of Potrero Nuevo (now Potrero Hill). At the same time, large swathes of the Western Addition and parts of the Mission were being subdivided into tracts that were later developed.⁶⁵

This same period saw the development of San Francisco's earliest cultural enclaves, as the city's various cultural and ethnic groups grew in size and established businesses, religious institutions, and other spaces that sustained community identity. The most identifiable of these enclaves was Chinatown, which was established by Chinese immigrants from the Pearl River Delta area of Guangdong Province, an area surrounding a public plaza near Yerba

⁶¹ Rand Richards, *Historic San Francisco*, San Francisco: Heritage House Publishers, 1991, 38.

⁶² John S. Hittell, *A History of the City of San Francisco and Incidentally the State of California*, San Francisco: L. Bancroft & Company, 1878, 436-438.

⁶³ JRP, *Historic-Era Context in Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, February, Prepared by Brian F. Byrd, Philip Kaijankoski, Jack Meyer, and Adrian Whitaker of JRP; Rebecca Allen of Past Forward, Inc.; and Meta Bunse and Bryan Larson of JRP Historical Consulting, LLC, for the San Francisco Planning Department, San Francisco, CA, 2010, 43.

⁶⁴ Page & Turnbull, Inc., *Historic Context Statement for the Market & Octavia Area Plan Historic Resource Survey, San Francisco, California*, December 20, prepared for the San Francisco Planning Department, San Francisco, CA, 2007, 31.

⁶⁵ David Rumsey Historical Map Collection, *Composite: San Francisco Section I-V. Map of Western Addition, Land Claims. San Francisco, Land Claims*, map, 1858, <https://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~289005~90060593:Composite--San-Francisco-Section-I->, accessed October 26, 2021.

Buena Cove (current day Portsmouth Square). As early as the 1850s this area had a distinct cultural identity expressed through restaurants, laundries, and other commercial establishments. As the city expanded to the west and south, the passage of anti-Chinese legislation made Chinatown one of the few places in San Francisco open to Chinese residents. Japanese immigrants arriving in San Francisco after the 1860s also lived and created social organizations within Chinatown's boundaries, before establishing a few separate enclaves, including one in the Western Addition after the 1906 earthquake.^{66,67} Additional groups who migrated to San Francisco during and after the gold rush included Irish, German, and Jewish communities that formed identifiable enclaves in neighborhoods such as Potrero Hill and SoMa. Additional details on the social and demographic histories of San Francisco's neighborhoods are included in Appendix F.1, Table F-2, of this EIR.

By 1860, nearly 95 percent of the adults who had arrived in San Francisco during the gold rush had settled in the city. During the last four decades of the 19th century, development transformed San Francisco from a frontier port city to a modern Victorian city. In an era when the influence of private interests dwarfed the influence of government, growing wealth and private enterprise fueled expansion and development of the city. In 1860, the city's population was approximately 57,000. A decade later, San Francisco had nearly 150,000 residents.^{68,69}

This pattern of population growth led many neighborhoods on San Francisco's then-outskirts to expand rapidly, including parts of the Mission, Noe Valley, Portola, Potrero Hill, the Western Addition, Bayview, North Beach, and Pacific Heights. Established neighborhoods such as SoMa, Nob Hill, and Russian Hill also experienced new development. Horse-drawn streetcars, followed by electric streetcars in the 1870s, accelerated the development of neighborhoods that were farther from the established urban core.⁷⁰ Much of the western side of current day San Francisco, however, remained a vast, undeveloped dune field. **Figure 4.2-1** illustrates that in 1891 San Francisco's urban core remained concentrated in its northeastern quadrant (represented by darkly shaded blocks), although street grids had been planned to accommodate development across much of the rest of the city.

In this period of rapid population growth, San Francisco's municipal government struggled with the need to improve sanitation, water distribution, and firefighting infrastructure. Many residents with adequate financial means (primarily those of European descent) left the increasingly overcrowded downtown, which included Chinatown and the industrial environs of SoMa, in favor of the new residential areas at the perimeter of the city.

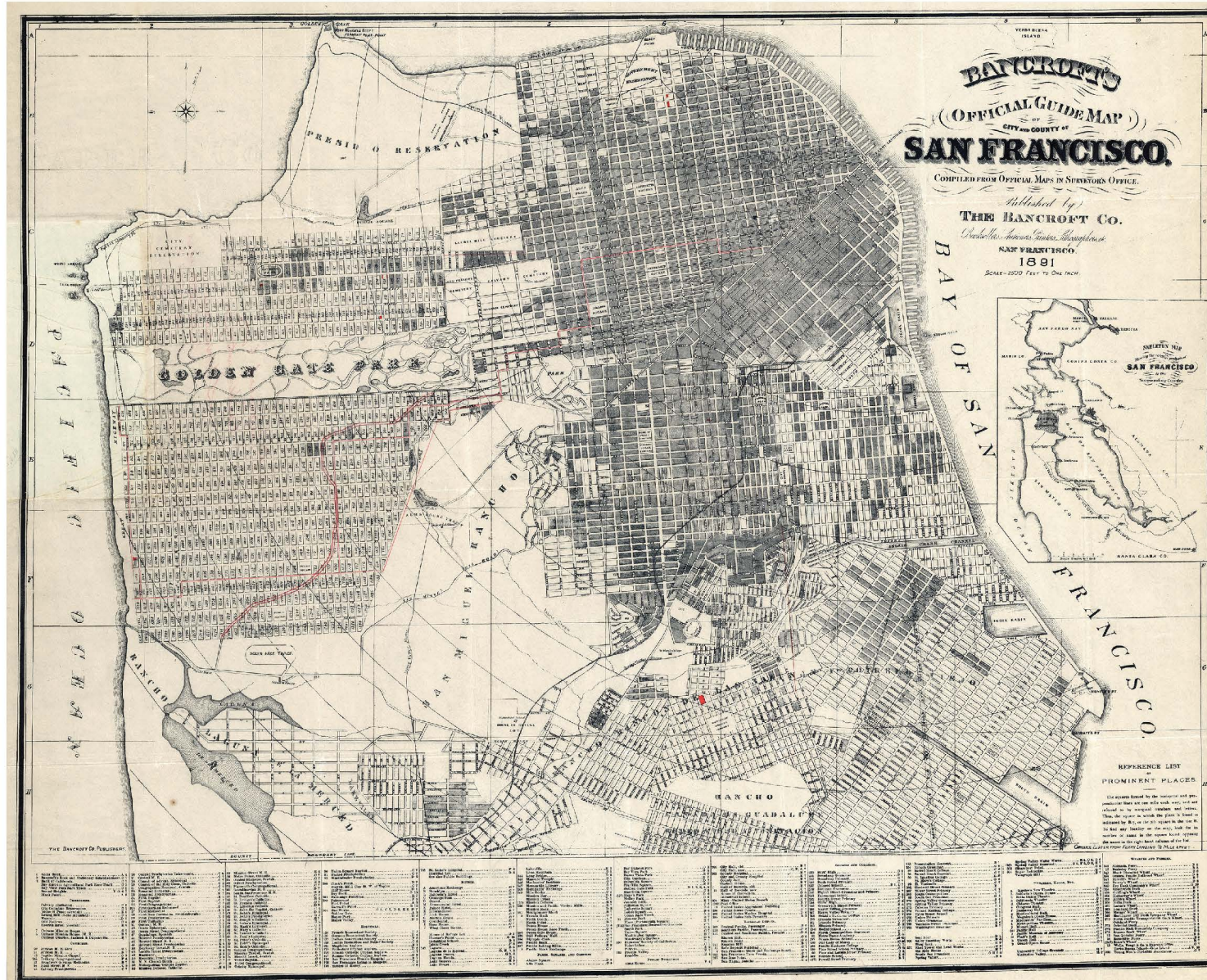
⁶⁶ Donna Graves and Page & Turnbull, *Historic Context: Japantown, San Francisco California*, revised, prepared for the San Francisco Planning Department, San Francisco, CA, 2011, 27.

⁶⁷ Grant Din, Alvin Lin, Eric Mar, Willian Tran, Palma You, and ICF, *San Francisco Chinese American Historic Context Statement*, prepared for the City and County of San Francisco, San Francisco, CA, 2021.

⁶⁸ John S. Hittell, *A History of the City of San Francisco and Incidentally the State of California*, San Francisco: L. Bancroft & Company, 1878, 366, 429.

⁶⁹ Mel Scott, *The San Francisco Bay Area: A Metropolis in Perspective*. Berkeley: University of California Press, 1985, 50-51.

⁷⁰ San Francisco Planning Department, *Inner Mission North 1853-1943 Context Statement*, City and County of San Francisco Planning Department, San Francisco, CA, 2005, 14.



Source: Bancroft's Official Guide Map of City and County Of San Francisco, 1891.

On April 18, 1906, a major earthquake struck the San Francisco Bay Area. The earthquake’s impact in San Francisco was worsened by liquefaction in areas that had been reclaimed through landfilling—including the Financial District, SoMa, and Marina neighborhoods—which caused numerous buildings to collapse. In the days that followed the earthquake, fire swept through the northeast quadrant of the city, destroying an estimated 28,000 buildings across more than 500 city blocks, including some of the city’s most densely populated residential neighborhoods. These include neighborhoods that housed many of San Francisco’s working-class and ethnic and racial minority residents, such as Chinatown and SoMa. Other residential neighborhoods in the “burned district” included North Beach, Russian Hill, Nob Hill, and the northern Mission. A layer of burnt soil and construction debris with late 19th-century artifacts is common in areas of the city that burned after the quake. The catastrophe resulted in more than 225,000 homeless San Franciscans and necessitated rapid capital investment for reconstruction. Many existing residential buildings in neighborhoods near the devastated parts of the city were converted into multi-family housing, while development efforts accelerated outside the burned district.^{71,72}

Rebuilding efforts after 1906 addressed the need for new residential and commercial buildings, as well as for repairing or replacing a wide array of infrastructure (e.g., streets, sidewalks, sewers, and water mains). The post-earthquake reconstruction period resulted in infill on vacant parcels and replacement of existing buildings. However, some residents also chose to relocate to the western and southern edges of the city (such as the Outer Mission, Inner Richmond, and Visitacion Valley) that were away from the fire debris and perceived as safer, and with available swaths of vacant land. Nonetheless, the western side of the city continued to experience only sparse development for another two to three decades. Pockets of relatively rural development persisted in southern parts of the city into the 1940s. **Figure 4.2-2** illustrates San Francisco’s continued westward and southward expansion by 1915, the end of the post-earthquake reconstruction period.

During the post-1906 earthquake period San Francisco residents did not have equal housing opportunities. Some of the residential areas that private developers built were new “residence parks” on the city’s outskirts in the 1910s and 1920s, such as St. Francis Wood and Seacliff, that restricted homeownership to Whites. Developers of these areas typically incorporated restrictive race-based covenants into property deeds that legally discriminated against racial minorities who wished to buy homes there. In addition, anti-miscegenation laws, and redlining policies exacerbated the severe restrictions that San Francisco’s racial and ethnic minority groups faced regarding where they could live and whether they could receive home loans.⁷³ **Figure 4.2-3**, p. 4.2-24, shows the 1937 “residential security” classification of San Francisco neighborhoods that influenced private and public lending practices to potential homebuyers: “low-grade” or “redlined” neighborhoods viewed as financially risky were often those with working-class and racial and ethnic minority populations.

⁷¹ Nicole Frank, *Reconstruction-Era Edwardian Flats Draft Historic Context Statement, 1901–1915*, internal draft, City and County of San Francisco Planning Department, San Francisco, CA, 2018, 18–20.

⁷² City and County of San Francisco, Land Use GIS dataset, updated September 6, 2019, <https://datasf.org/>.

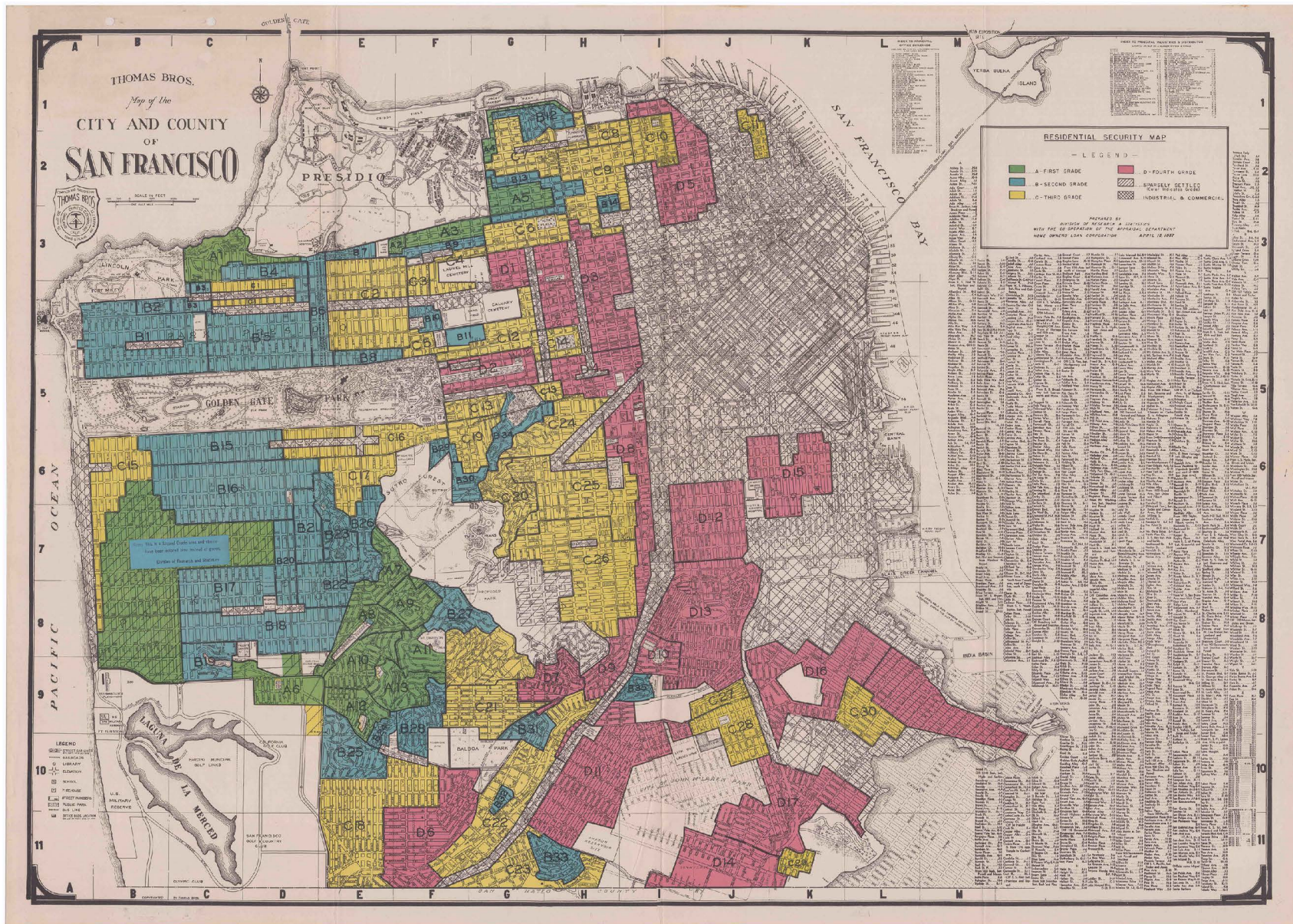
⁷³ Eli Moore, Nicole Montojo, and Nicole Mauri, *Roots, Race, and Place: A History of Racially Exclusionary Housing in the San Francisco Bay Area*, Berkeley, CA: Haas Institute for a Fair and Inclusive Society, 2019, <https://belonging.berkeley.edu/rootsraceplace>, accessed November 16, 2020, 35-37, 49, 52-53.



Source: Peter's San Francisco Locator, 1915.

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Figure 4.2-2
 San Francisco Urban Development in 1915



Source: Home Owners' Loan Corporation Division of Research & Statistics, 1937.

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Figure 4.2-3
1937 Residential Security Classification
of San Francisco Neighborhoods

In the same period, San Francisco’s cultural enclaves continued to strengthen and expand. Chinatown, for instance, remained limited to those of Asian, primarily Chinese, descent. The first wave of Filipino immigrants who arrived in San Francisco between 1910 and 1940 created their own enclave, Manilatown, along Kearny Street between Pine and Pacific streets.⁷⁴ By 1910, the core area of Japantown in the Western Addition was home to more than 50 Japanese-owned commercial establishments as well as most of the city’s approximately 4,700 Japanese residents.⁷⁵

During the 1930s, changes in transportation usage and development began to alter the existing character of many of San Francisco’s residential neighborhoods. Completion of the San Francisco-Oakland Bay and the Golden Gate bridges in 1936 and 1937, respectively, augmented existing ferry routes by providing a direct connection for automobiles, buses, and streetcar travel between San Francisco and the north and east bays. Although the bridges helped increase employment in San Francisco, they also reinforced residents’ reliance on private automobiles, promoted residential development in previously inaccessible areas in Marin and Alameda counties, and hastened the decline of the region’s streetcar systems.⁷⁶

When the United States entered World War II in 1941, shipyards around the Bay Area drew hundreds of thousands of workers, including Blacks who participated in the Great Migration and escaped oppressive Jim Crow conditions in the U.S. South. Many defense-related workers chose to stay in the Bay Area after the war. Also significant during World War II was the eviction of San Francisco’s residents of Japanese heritage from the city. Several months after the Japanese bombing of Pearl Harbor in late 1941, President Franklin Roosevelt signed Executive Order 9066, which resulted in more than 5,000 Japanese-American residents of San Francisco forced from their homes and businesses and incarcerated during the remainder of the war.⁷⁷ With the Japanese-American population removed from San Francisco, other racial minority groups—namely Filipino and Black residents—moved into vacant housing in Japantown and continued a racially and ethnically diverse Fillmore Street commercial corridor.^{78,79} Although Black residents had been in San Francisco from its earliest decades, the World War II period and mid-20th-century years saw the largest increase in this group as many arrived for shipyard and industrial work. After the war ended, concentrations of Black residents grew in the Bayview Hunters

⁷⁴ Page & Turnbull, *San Francisco Filipino Heritage Addendum to the South of Market Historic Context Statement*, prepared for the San Francisco Planning Department, San Francisco, CA, 2013, 1–7.

⁷⁵ Donna Graves and Page & Turnbull, *Japantown Historic Context Statement*, prepared for the San Francisco Planning Department, San Francisco, CA, 2011, 29.

⁷⁶ WSA, Major Environmental Analysis, San Francisco Planning Department Archaeological Technical Memorandum, in *San Francisco General Plan, Housing Element Environmental Impact Report*, San Francisco, CA, 2010, 16-17.

⁷⁷ Donna Graves and Page & Turnbull, *Japantown Historic Context Statement*, prepared for the San Francisco Planning Department, San Francisco, CA, 2011, 41-42.

⁷⁸ Tim Kelley Consulting, Alfred Williams Consultancy, VerPlanck Historic Preservation Consulting, and San Francisco Planning Department, *African American Citywide Historic Context Statement*, final draft, January, prepared for the City and County of San Francisco, San Francisco, CA, 2016, 82.

⁷⁹ Page & Turnbull, *San Francisco Filipino Heritage Addendum to the South of Market Historic Context Statement*, prepared for the San Francisco Planning Department, San Francisco, CA, March 13, 2013, 12.

Point (near a large naval shipyard that employed many Black wartime workers) and Ocean View/Merced/Ingleside neighborhoods.⁸⁰

Residential development and the movement of San Francisco's various demographic groups continued to define the post-World War II period. An influx of new residents (including returning veterans) and the availability of private automobiles meant real estate developers continued to build on still-vacant parcels in western neighborhoods, such as the Richmond and Sunset districts, into the second half of the 20th century. Some of the city's middle- and upper-class residents chose to relocate their families to the region's rapidly expanding suburbs outside of San Francisco; this trend increased the housing supply in neighborhoods like the Mission where a pronounced Latinx community expanded in the mid-20th century.

During this period, agencies at the city, state, and federal levels promoted publicly funded freeway, transit, and urban renewal projects to modernized San Francisco's urban fabric and transportation infrastructure. In light of ongoing suburban growth in the region, civic leaders became concerned with so-called "blighted" urban neighborhoods (which typically contained concentrations of working-class and racial/ethnic minority residents) and automobile congestion on the Bay Area's primary transportation arteries. In 1948, the San Francisco Department of City Planning developed the *Comprehensive Trafficways Plan*, a vision of a car-oriented San Francisco crossed by multiple elevated freeways. With the support of the California Department of Highways, this vision began to be realized through the construction of the Embarcadero Freeway along the northeastern waterfront and the Central Freeway into the city's core. Simultaneously, redevelopment projects and privately sponsored commercial office tower construction brought much taller development to San Francisco's Financial District. Additionally, funding for the Bay Area Rapid Transit system was authorized in 1962, and construction of the region-wide transit network commenced in 1964. The city's northeastern quadrant sustained most of the changes associated with these various projects, including demolition of existing buildings, excavation for transit subways, and drilling for deep foundations and piles.^{81,82}

Such large-scale projects in San Francisco, as in many American cities, also frequently led to community displacement, and San Francisco residents responded by organizing to halt agency plans. By demolishing portions of several San Francisco neighborhoods, redevelopment and freeway construction projects disproportionately affected working-class and minority groups living in the targeted neighborhoods, such as the Western Addition and SoMa. Redevelopment projects faced sharp criticism from residents, and mounting opposition to freeway construction led to the so-called Freeway Revolt of 1959 to 1962, which successfully ended extensions of the Embarcadero Freeway and Central Freeway. (Both freeways sustained damage in the 1989 Loma Prieta earthquake and were subsequently dismantled or shortened.)⁸³ By the 1960s, affluent residents also

⁸⁰ Tim Kelley Consulting, Alfred Williams Consultancy, VerPlanck Historic Preservation Consulting, and San Francisco Planning Department, *African American Citywide Historic Context Statement*, final draft, prepared for the City and County of San Francisco, San Francisco, CA, January 2016, 1.

⁸¹ WSA, Major Environmental Analysis, San Francisco Planning Department Archaeological Technical Memorandum, in *San Francisco General Plan, Housing Element Environmental Impact Report*, San Francisco, CA, 2010.

⁸² Hunter Oatman-Stanford, *The Bad Design That Created One of America's Worst Housing Crises*, Fast Company, September 28, 2018, <https://www.fastcompany.com/90242388/the-bad-design-that-created-one-of-americas-worst-housing-crises>, accessed March 23, 2022

⁸³ Chris Carlsson, *The Freeway Revolt*, Shaping San Francisco, 2021, https://www.foundsf.org/index.php?title=The_Freeway_Revolt, accessed March 23, 2022.

began to fear the effects of new development projects on the character of their neighborhoods. In the 1970s, the city imposed new zoning controls that lowered allowable densities and height limits in most of San Francisco's residential neighborhoods outside of the downtown core.^{84,85} By the early 21st century, much of San Francisco had been developed. The limited amount of available land led to more frequent and larger infill-type housing projects in San Francisco. The expense of land and real estate continues to be among the city's 21st-century issues.

2050 ENVIRONMENTAL BASELINE CONDITIONS

As described in Chapter 4, Environmental Setting and Impacts, this EIR assumes that housing development would continue to occur in San Francisco under the policies and implementing measures of the existing 2014 housing element if the proposed housing element update is not adopted. Therefore, this EIR uses a future 2050 environmental baseline for analysis of impacts of the proposed action. The analysis of potential impacts on significant built-environment, archeological resources, and human remains over the lifespan of housing element update policies relies upon a comparison to the intensity and distribution of housing construction that is expected to occur in San Francisco under the policies of the existing 2014 housing element. This picture of anticipated housing construction through 2050 (referred to as the 2050 environmental baseline) reflects the level of housing construction that would be anticipated to occur, as well as the location of that housing, if the proposed housing element update is not adopted.

As discussed under "2050 Projected Growth Under the Existing 2014 Housing Element" in Chapter 2, Project Description, under 2020 conditions, there are approximately 407,000 housing units in the city. Under the existing 2014 housing element, the department estimates that there would be approximately 508,800 housing units in the city by 2050, an increase of 101,700 housing units compared to 2020 conditions. Therefore, the analysis of environmental impacts in this EIR is based on a comparison of growth under the 2014 housing element to growth under the housing element update. Under the 2050 environmental baseline, it is possible that some built-environment historic resources would be demolished; however, the department's modeling of the 2050 environmental baseline included historic resource status as a constraint factor along with other factors (e.g., size, height, etc.) to allocate projected growth. In other words, the 2050 environmental baseline assumes that a parcel's built-environment historic resource status may discourage future redevelopment in some instances, but it remains possible that historic resources could be demolished to accommodate future development under the 2050 environmental baseline.

As discussed under "Pipeline Projects" in Chapter 2, as of December 2020, there are approximately 70,800 new housing units in the city's pipeline projects.

⁸⁴ San Francisco Planning Commission, *San Francisco Planning Commission: Centennial Celebration*, brochure, 2017, https://default.sfplanning.org/publications_reports/SF_Planning_Centennial_Brochure.pdf, accessed March 23, 2022

⁸⁵ Hunter Oatman-Stanford, *The Bad Design That Created One of America's Worst Housing Crises*, Fast Company, September 28, 2018, <https://www.fastcompany.com/90242388/the-bad-design-that-created-one-of-americas-worst-housing-crises>, accessed March 23, 2022

BUILT-ENVIRONMENT RESOURCES

With regard to built-environment resources, the environmental setting for the proposed action comprises previously identified and potential historic resources (buildings, structures, objects, sites, and districts) that could be altered by future development consistent with housing element update policies.

Given that the proposed action may influence development patterns on an expansive (citywide) scale, this chapter does not present a comprehensive list of the thousands of previously identified historic resources in San Francisco. Rather, it broadly characterizes the patterns of historic-period development in San Francisco and identifies the current setting for built-environment resources.⁸⁶ This discussion is supported by a summary of the processes through which the department identifies built-environment historic resources and is accompanied by neighborhood-level⁸⁷ data and maps that provide greater geographic specificity as to the locations of known historic resources.

The discussion then characterizes a 2050 historic resources forecast. Although this analysis cannot establish with certainty which properties in San Francisco will become CEQA built-environment historic resources, the 2050 forecast presents neighborhood-level data to estimate the number of built-environment historic resources anticipated to exist in each of San Francisco's neighborhoods by 2050. Finally, the discussion of built-environment resources compares 2021 conditions, 2050 built-environment historic resource forecast, and 2050 environmental baseline by neighborhood. This comparison supports a general understanding of the intensity of future development, and thus the potential for change to built-environment historic resources, by neighborhood through 2050 under the existing 2014 housing element.

2021 Built-Environment Resource Conditions

Urban development patterns across San Francisco have resulted in a diverse built environment with buildings, structures, objects, cultural landscapes, and historic districts that generally date from the second half of the 19th century to the present. The built fabric of the city, with its residential, commercial, industrial, institutional, recreational, and numerous other property types, reflects the imprint of the numerous racial, ethnic, and social groups that settled and formed communities in San Francisco since the city's founding.

The setting includes individual built-environment resources and historic districts across the city that have been identified as meeting the CEQA definition of a historical resource due to their ability to convey San Francisco's complex physical change, rich social and community history, and distinct aesthetic and building traditions.

The department's efforts to identify built-environment historic resources in San Francisco that meet CEQA criteria are ongoing. The primary tools and the types of investigations that the department uses to determine the status of built-environment resources include the following: past historic resource surveys; evaluations completed as part of the environmental review process; and historic register nominations and designations initiated by the city, other agencies, or community members. Some of these efforts have occurred for an

⁸⁶ For built-environment resources, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

⁸⁷ The city is divided into 41 neighborhoods, which are based on census tracts and are used to provide consistency in the analysis and reporting of socio-economic, demographic, and environmental data as well as data on city-funded programs and services.

individual parcel, while others have addressed the built fabric of entire neighborhoods. Others have considered a particular property type or historic theme that applies to resources citywide. The findings of these efforts inform the department as well as decision makers about the presence of historic resources throughout the city and how they might be affected by proposed projects.

To track the historic status of built-environment resources, the department assigns all parcels in San Francisco to one of the following three categories:

- Category A: Properties that qualify as historic resources based on previous historic resource surveys, designations, or evaluations
- Category B: Properties over 45 years of age that require evaluation as historic resources
- Category C: Properties that are not yet 45 years of age or that have a valid existing evaluation indicating they do not qualify as a historic resource⁸⁸

The following sections provide additional details regarding the tools the department uses to evaluate built-environment historic resources. Following these summaries is a discussion of the built-environment historic resources that the department has identified as of 2021, which is supported by figures and a table that depict the locations of known historic resources by neighborhood.

Built-Environment Surveys

Since the movement to establish legal preservation frameworks and professionalize the historic preservation field began in the 1960s and 1970s, various groups of San Francisco architectural historians, urban planners, and community advocates have conducted surveys of the city's built environment. Surveys have documented the qualities of many of the city's historic-period buildings, structures, objects, districts, and cultural landscapes, often involving visual inspection, recordation, and evaluation for inclusion in local, state, or national historic registers. The aim of historic resource surveys conducted in San Francisco over the past 50 years typically has been to identify those resources that are architecturally or historically significant and that therefore merit legal protections or special consideration during local planning and environmental review processes.

Early surveys in San Francisco assessed resources primarily by their physical architectural qualities, and as a result many of the properties these surveys recognized as significant were architecturally grand residences and commercial buildings associated with master builders, architects, and members of San Francisco's privileged classes (most typically men of European ancestry).⁸⁹ Early surveys also placed greatest emphasis on the city's eastern and northern neighborhoods, such as Downtown, Nob Hill, Pacific Heights, Russian Hill, and Western Addition, that historically contained the homes and workplaces of elite San Franciscans. Subsequent surveys

⁸⁸ San Francisco Planning Department, *San Francisco Preservation Bulletin No. 16: City and County of San Francisco Planning Department CEQA Review Procedures for Historic Resources*, 2008, https://sfplanning.org/sites/default/files/documents/preserv/bulletins/HistPres_Bulletin_16.PDF, accessed March 23, 2022

⁸⁹ Even though early built-environment surveys focused on examples of ornate and high-style architecture built for San Francisco's White elites, they did recognize a range of resource types. For example, *Here Today*, the 1968 book that reported survey findings from the Junior League of San Francisco, included discussion of finely appointed buildings in Chinatown as well as housing for working- and middle-class residents.

have expanded in geographic scope and increasingly involved the preparation of detailed historic context narratives, which describe the broad historical patterns that influenced the physical and social development of a particular resource type or part of the city. These narratives, in turn, have informed evaluations that consider a variety of social or cultural patterns rather than solely the aesthetic and stylistic character of a resource's designed elements. For instance, evaluations produced in association with recent historic resource surveys often considered themes such as demographic change and the experiences of minority ethnic, racial, or other social groups, whereas many earlier surveys conducted in the 1970s did not. Currently, it is standard for surveys conducted on behalf of the department to evaluate resources under national register or California register Criteria A/1 (Events) and Criteria B/2 (Persons) in addition to Criteria C/3 (Design and Construction).

Historic resource surveys have also increasingly considered cultural landscape features, such as vegetation, topography, archeological resources, and small-scale features, that contribute to multi-component resources and historic districts. In addition, some historic resource surveys undertaken by the department or community groups include evaluative frameworks that establish special considerations to inform evaluations of the particular resource type or historic context theme being surveyed. For instance, such an evaluative framework might propose a lower integrity threshold for resources associated with a particular social group's significant patterns of events that do not tend to be clearly conveyed by a property's physical features. In some cases, historic resource surveys are conducted across an entire neighborhood to inform the environmental review process for a large-scale development or planning project, such as an area plan. The survey findings identify the eligible historic resources that may be subject to substantial adverse change as a result of the project. In other cases, neighborhood residents or community groups initiate a survey themselves, such as the 1982 *North Beach Architectural, Historical Cultural Survey*.

If a survey finds resources to be significant and the survey has been adopted by the historic preservation commission, planning commission, or board of supervisors, then generally those resources meet the CEQA definition of a historical resource.⁹⁰ A list of completed San Francisco historic resource surveys with adopted findings is in Appendix F.1, Table F-1, of this EIR. Each survey is summarized with details that include the number of resources surveyed and evaluated, as applicable; the thematic or geographic scope of the survey; details on the historic context narrative that accompanied the survey results; and any special evaluative considerations that were developed to inform the survey findings. This table does not include past surveys that did not result in historic resource evaluations.

San Francisco Planning Department CEQA Review Process

When a project subject to CEQA is proposed and based on the proposed scope of work, the department requires an evaluation for properties with the potential to be affected by the project. Properties subject to evaluation are typically more than 45 years old and have not previously been evaluated, but the department also requires evaluation if it has information to indicate that a property is potentially eligible. As described above, many

⁹⁰ A built-environment resource identified as significant in a survey will qualify as a historic resource unless the department later determines a preponderance of evidence exists that the resource is not historically or culturally significant, per CEQA Guidelines section 15064.5(a)(2). Article 10 of the planning code states that the historic preservation commission shall have the authority to oversee and direct the survey and inventory of historic properties (1002(a)(8)). Historic resource surveys finalized after the establishment of the historic preservation commission are brought to them for their adoption.

historic-aged resources in the city have previously received evaluations in adopted surveys with findings that remain valid for CEQA review. While not an exhaustive list, the department also considers properties that meet any of the following conditions to qualify as historic resources: a property that is locally designated as an article 10 landmark; a Category I, II, III, or IV building under article 11; or a contributor to an article 10 or article 11 district. Article 11 Category V buildings do not qualify as historic resources on the basis of their article 11 designation alone and typically warrant California register evaluations.⁹¹ However, if a property lacks a valid historic resource finding, the department typically requires the project sponsor to engage a professionally qualified historic preservation professional to assess the property's eligibility for listing in the California register as part of the environmental review process. If an existing or new evaluation finds that a property qualifies as a significant resource (as defined in CEQA Guidelines section 15064.5), the proposed project's effect on the qualifying property must be assessed against CEQA impact thresholds. If a project meets the secretary's standards, or if the project would not materially impair the resource, its impact on built-environment resources would be less than significant. If the project would materially impair the significance of a historic resource, the department prepares an environmental document that discloses the project's historic resource impacts to the public, proposes mitigation measures that would lessen the level of impact, presents a range of project alternatives if the of the document is an EIR, and seeks public comment on the analysis.

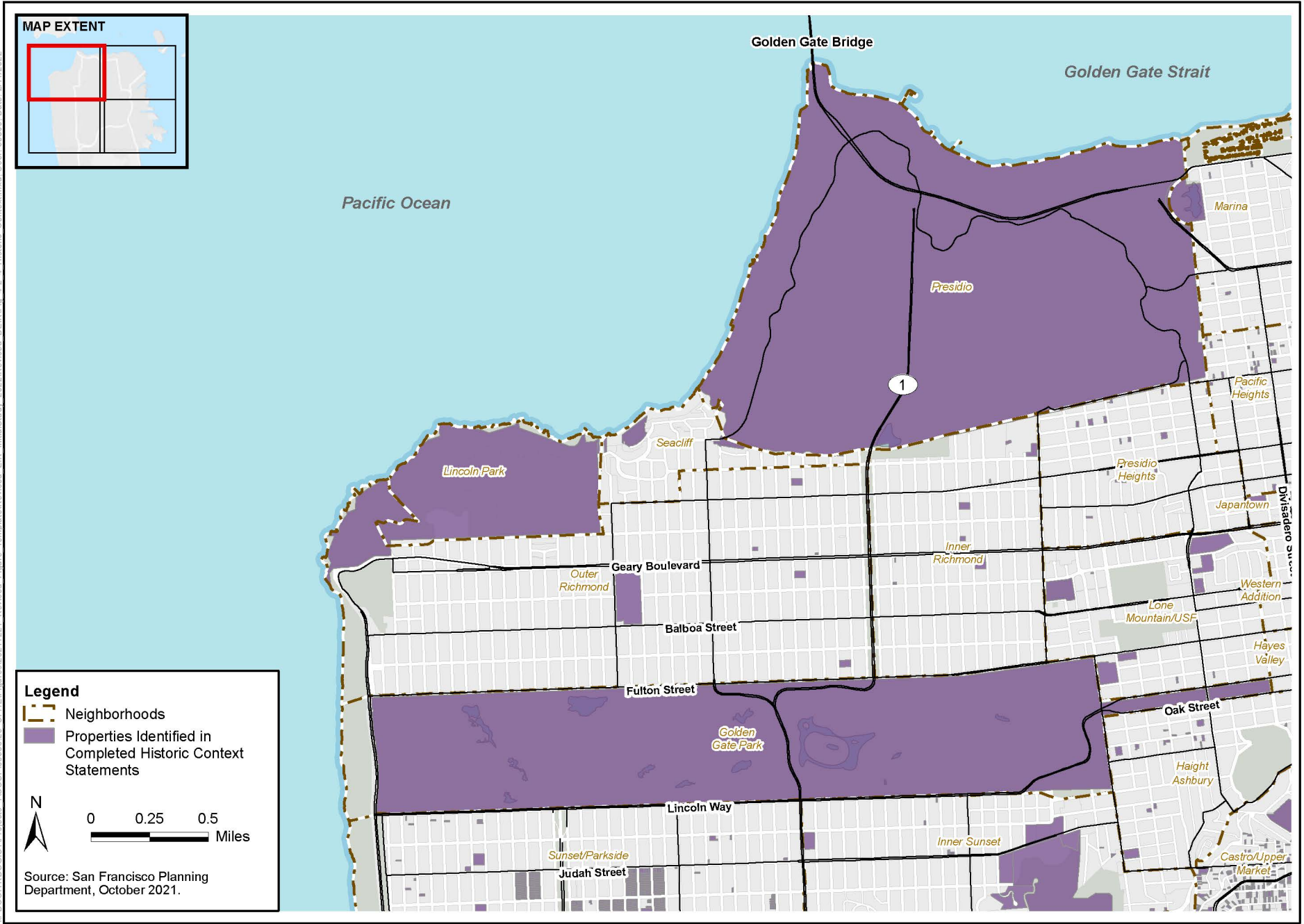
Historic Context Statements

Historic context statements are planning documents that provide information to guide the evaluation of numerous properties. A thematic approach considers the historical progression of a particular development pattern, building typology, or social or cultural group over time and is less specific to a particular location. In some instances, a historic context statement has focuses that are both geographic and thematic.

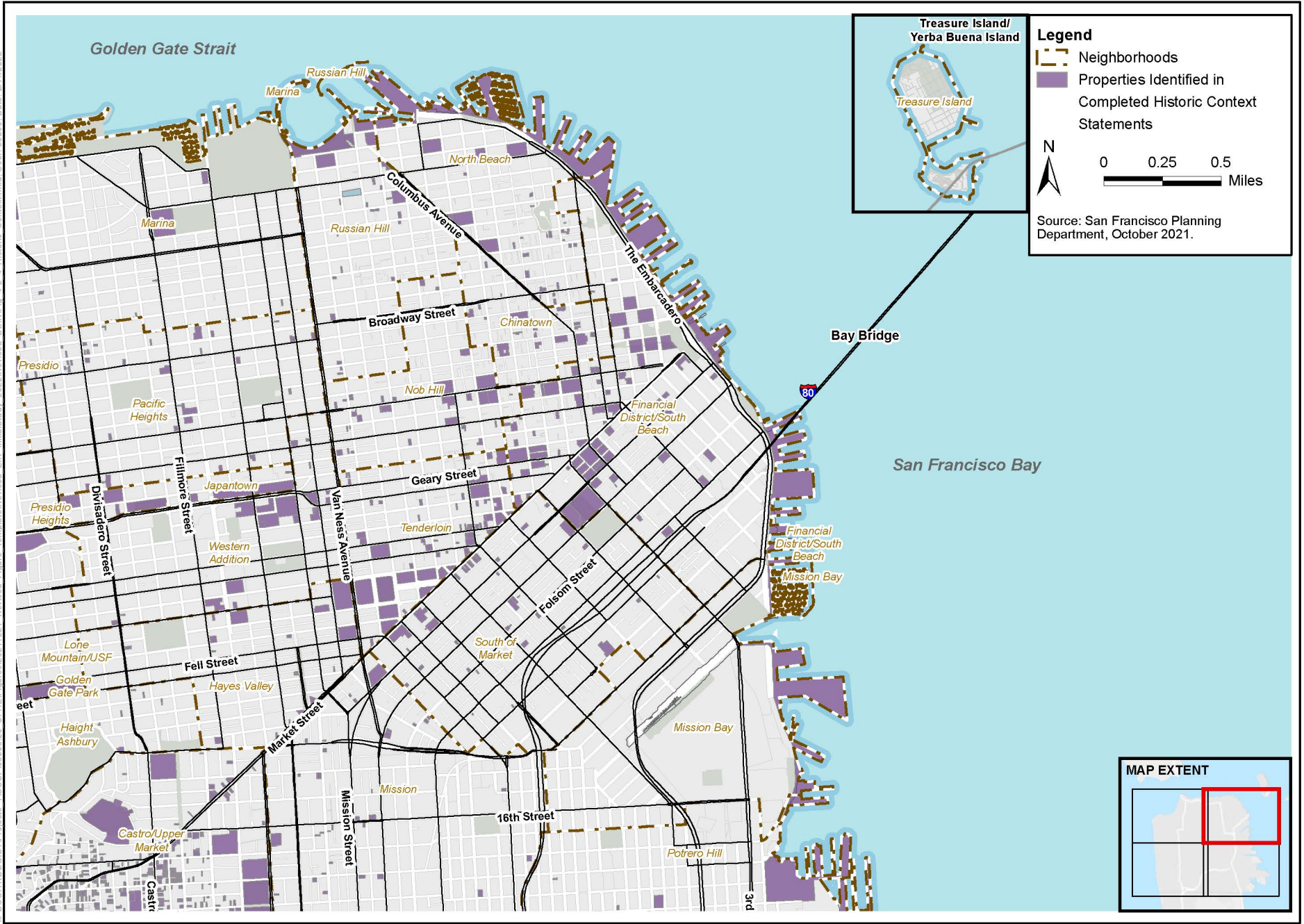
Historic context statements include two key components, a historical narrative and an evaluative framework. The historical narrative—or context—is related to the specified geographic area and/or theme(s) and provides critical background information that forms the basis for understanding areas of significance (such as important events, people, and trends). The evaluative framework offers guidance for making determinations about the eligibility of a given property and discusses significance criteria and thresholds, integrity issues, and other considerations. Narrative contexts and evaluative frameworks often include examples of associated properties that have been found eligible for listing on local, state, or national historic registries. They often also present properties that have not yet been evaluated but could meet the eligibility requirements, based on information presented in the historical narrative. Historic context statements do not necessarily provide a full evaluation of these examples and the department would then consider this information during future resource evaluations. Properties mentioned in historic context statements reviewed by the historic preservation commission are included in the department's publicly available geospatial data. **Figures 4.2-4a** through **4.2-4d** show areas where the department has identified potential resources in completed and historic-preservation commission-reviewed historic context statements.

⁹¹ San Francisco Planning Department, *San Francisco Preservation Bulletin No. 16: City and County of San Francisco Planning Department CEQA Review Procedures for Historic Resources*, 2008, https://sfplanning.org/sites/default/files/documents/preserv/bulletins/HistPres_Bulletin_16.PDF, accessed March 23, 2022.

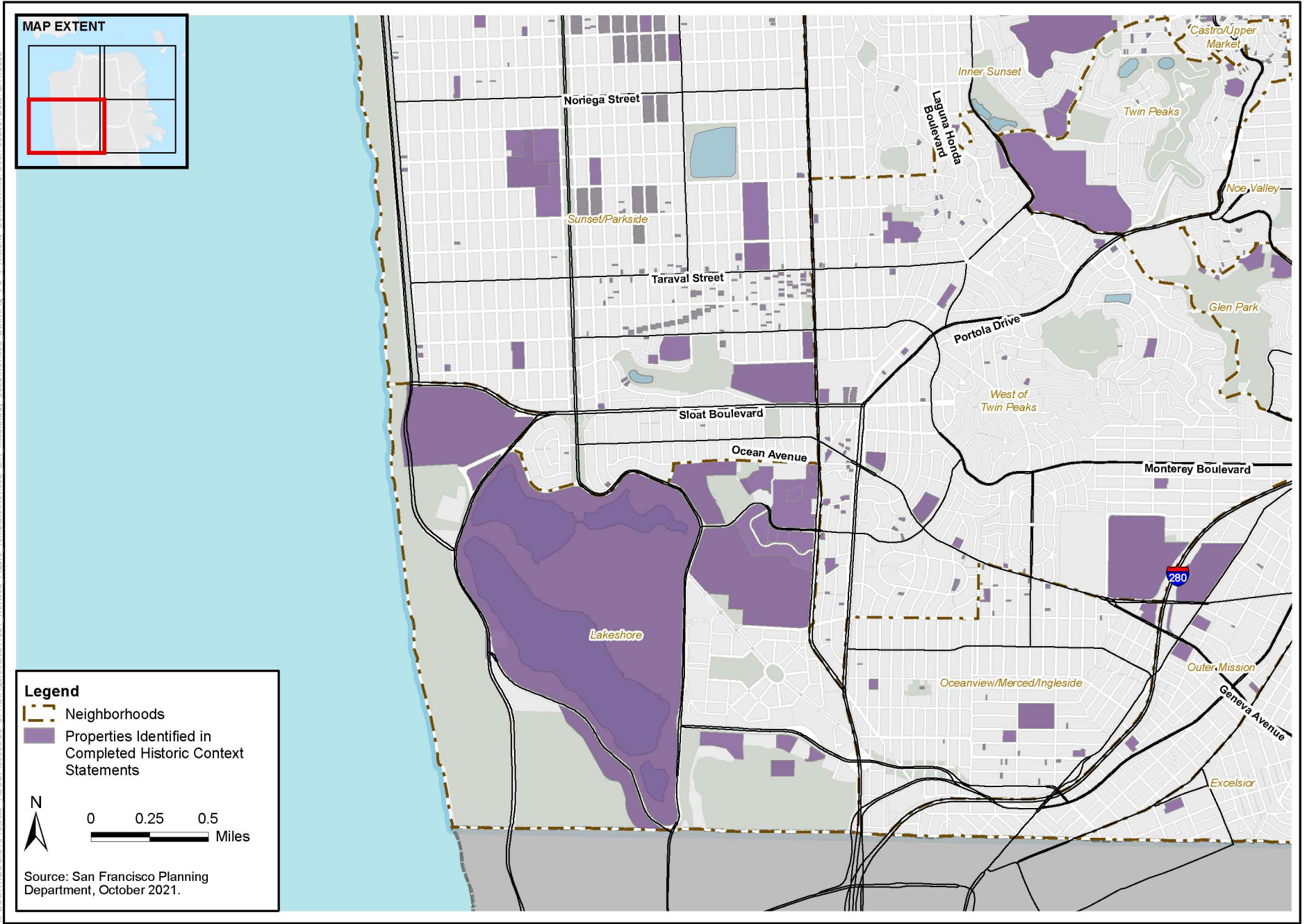
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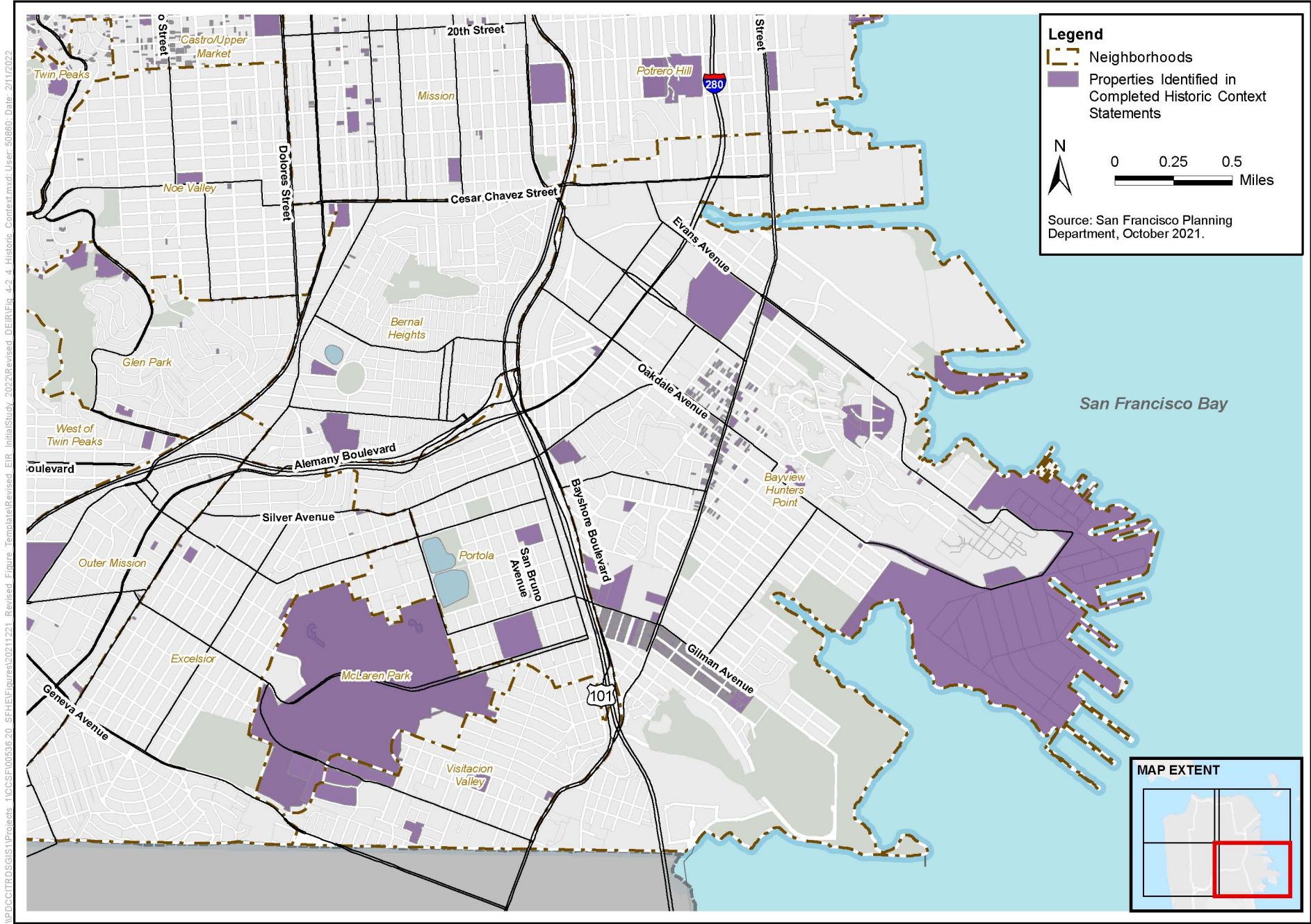


Figure 4.2-4d
Properties Identified in Completed Historic Context Statements

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Among the context statements adopted or under preparation by the department are several that specifically address the dynamics of San Francisco's diverse social history and cultural heritage. Typically prepared with input from community members, these historic context statements describe the historical experiences of various social, racial/ethnic, or cultural communities and include evaluative frameworks that help investigators assess the potential significance of properties that are associated with the social context under discussion. The department considers these documents particularly useful in understanding and assessing the built-environment resources that are more likely to have social and cultural importance rather than design, aesthetic, or construction value. These social, racial/ethnic, or cultural historic context statements often contain evaluative frameworks that emphasize important historical or cultural events and patterns, movements, organizations, businesses, people, public art, and culturally specific building or construction trends. They offer guidance rather than prescriptive or rigid rules for evaluating significance and historic resource eligibility. Discussions of integrity, for example, stress different aspects than do historic context statements about architecture or construction. They may include discussions about common biases against modest buildings that have social or cultural importance but are not architecturally distinguished. In addition, they often encourage individual property research and input from descendant communities as important steps in the evaluation process. The San Francisco Cultural Resources Survey, which is described in detail in a subsequent section, will involve the preparation of a number of social-and cultural-focused context statements.

Appendix F.1, Table F-3, of this EIR provides summaries of existing and in-progress historic context statements that focus on the histories and cultural heritage of marginalized communities in San Francisco, such as the American Indian Historic Context Statement, which the department is prioritizing because of its racial and social equity goals and direction provided in historic preservation commission resolution 1127 to increase the number of designated properties associated with marginalized communities. These historic context statements will inform ongoing efforts to understand the historic resource status of built-environment resources across the city during the timeframe of the proposed action (i.e., to 2050).

Cultural Districts

Cultural districts are specific, community-defined geographic areas or locations within the city that embody a unique cultural heritage because they contain concentrations of cultural and historic assets and culturally significant enterprises, arts, services, or businesses. Additionally, a significant portion of residents or people who spend time in the area are members of specific racial, ethnic, or other social groups that have been historically discriminated against, segregated, or oppressed in other ways and continue to face challenges in light of economic gentrification and displacement.

In May 2018 San Francisco formalized its Cultural District Initiative and established a program managed by the Mayor's Office of Housing and Community Development and allocated funds from the city's hotel tax to support cultural districts. Formally designated cultural districts are led by community advisory boards and supported by city departments and public funding. An inter-departmental steering committee, including representatives from the Office of Economic and Workforce Development, the Arts Commission, the Mayor's Office of Housing and Community Development, as well as the department, collaborates to provide various resources for the benefit of designated cultural districts. Each cultural district develops a Cultural History, Housing, and Economic

Sustainability Strategies report, which is a strategic plan that is presented to the board of supervisors for approval by resolution.

Although cultural districts are not historic districts and therefore do not automatically qualify as historic resources for environmental review, the existence of a cultural district suggests an increased likelihood that culturally associated historic resources are present within the cultural district boundaries. The reports, documentation, and information produced to identify cultural districts are used by the department to inform historic resource identification and evaluation. Future survey and historic resource evaluation efforts will also include a review of cultural districts, related reports and documentation, information on identified cultural assets, and/or consultations with the cultural districts and community leadership.

The nine established cultural districts are the following: Japantown Cultural District; Calle 24 Latino Cultural District; SoMa Pilipinas – Filipino Cultural Heritage District; Compton’s Transgender Cultural District; Leather and LGBTQ Cultural District; African American Arts and Cultural District; Castro LGBTQ Cultural District; American Indian Cultural District; and Sunset Chinese Cultural District. Appendix F.1, Table F-4, of this EIR presents further information on the location and thematic scope of each of San Francisco’s cultural districts.

Cultural Enclaves

Cultural enclaves are areas of the city that previous or in-progress historic context statements have identified as historically associated with specific minority social or cultural groups identified in historic preservation commission resolution 1127 and in department racial and social equity goals. After review of known historic resources and cultural districts, the department identified three cultural enclaves that capture historical concentration of such cultural groups that were not otherwise identified based on review of culturally focused historic context statements or surveys. Enclaves have been identified through historic context research and community engagement; to that end, enclaves are likely to contain culturally associated properties that could qualify as historic resources. The three identified cultural enclaves are the following:

- Inner Richmond New Chinatown cultural enclave, identified based on the findings and research of the draft *Chinese-American Historic Context Statement*.⁹²
- The Fillmore cultural enclave, identified based on the findings of the draft *African American Citywide Historic Context Statement*.⁹³

⁹² The Inner Richmond New Chinatown cultural enclave was identified based on substantial concentration of Chinese businesses near the intersection of 6th Avenue and Clement Street where the No. 2 Muni bus line used to terminate. This area became known as the new Chinatown and centered on the Clement Street commercial corridor between Arguello Street and 14th Avenue but also extended farther south to Geary and Balboa streets.

⁹³ The Fillmore cultural enclave was identified based on the influx of African Americans to the Western Addition in the years preceding World War II. The eight-block stretch of Fillmore Street between Sutter and McAllister streets soon became the main street for this African American community, whose members began to refer to the area simply as “The Fillmore.” The boundaries of this enclave were further refined to include census tracts with a substantial African American population.

- Oceanview-Merced Heights-Ingleside cultural enclave, identified based on the findings of the draft *African American Citywide Historic Context Statement*.⁹⁴

For the purposes of this EIR, cultural enclaves were not identified in areas with existing cultural districts, because the presence of cultural districts already captures the cultural and social importance of those areas. The identification of cultural enclaves does not automatically qualify properties within these area as historic resources for CEQA purposes. Rather, the identification of cultural enclaves is used by the department to inform historic resource identification. The department anticipates that additional cultural enclaves will be identified as culturally focused historic context statements and theme studies identified in **Table 4.2-1**, p. 4.2-42, are completed.

Figure 4.2-5 shows the locations of existing or proposed cultural districts and enclaves in San Francisco.

San Francisco Legacy Business Registry

In 2015, the city established the San Francisco Legacy Business Registry, an inventory of San Francisco businesses 30 years or older that have demonstrated a historic connection and significance to their neighborhoods. Selected through a nomination and review process, businesses listed in the registry commit to maintaining their historical names and business operations, and they become eligible for grants from the Legacy Business Historic Preservation Fund.⁹⁵

Although listing in the inventory recognizes a business's status as a historical or cultural asset, it does not automatically qualify properties containing listed businesses as historic resources for CEQA purposes. Rather, the documentation produced for the registry suggests the businesses may meet California register eligibility criteria and is used by the department to inform historic resource identification. **Figure 4.2-6**, p. 4.2-21, shows the locations of businesses listed in the Legacy Business Registry.

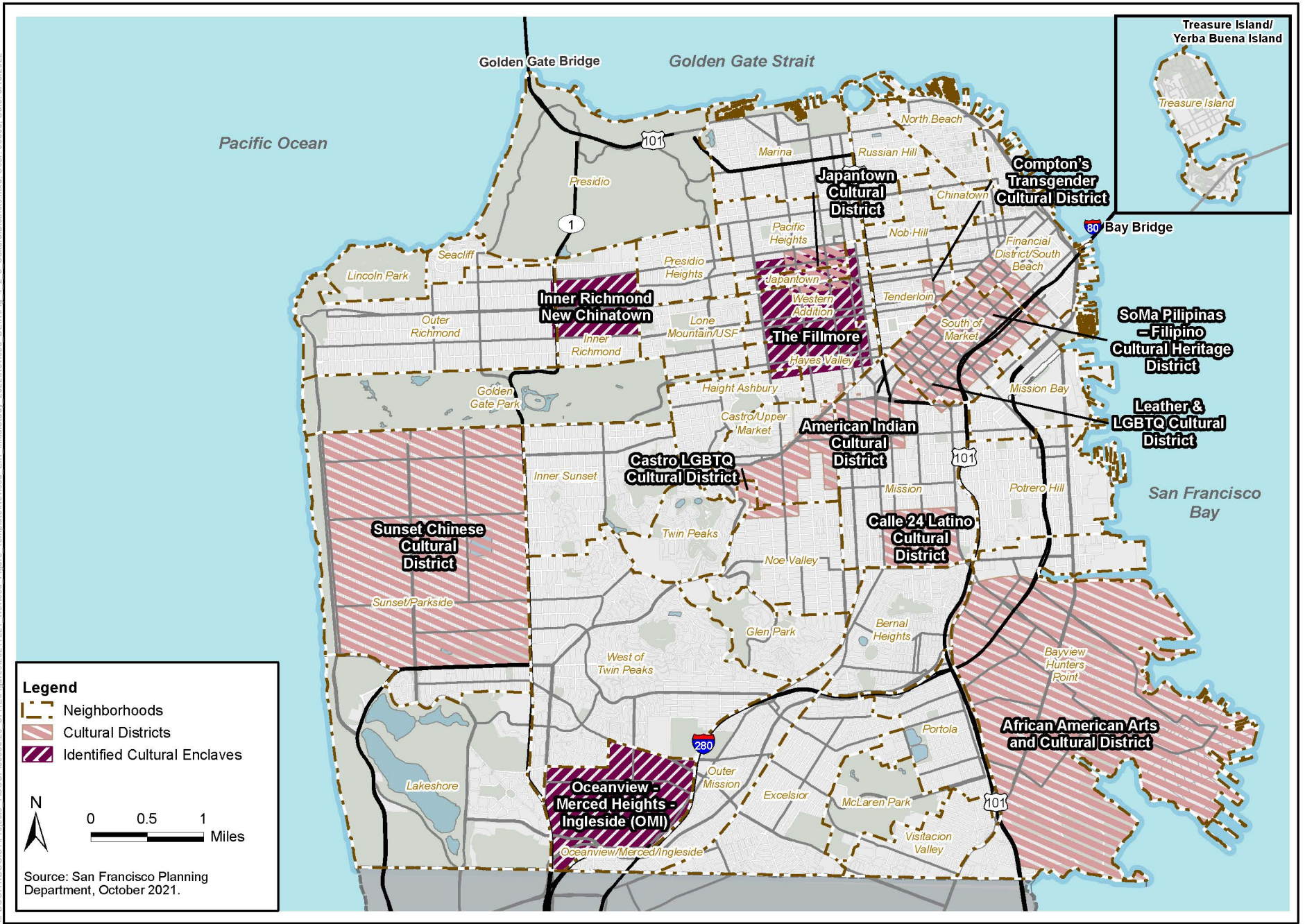
San Francisco Cultural Resources Survey

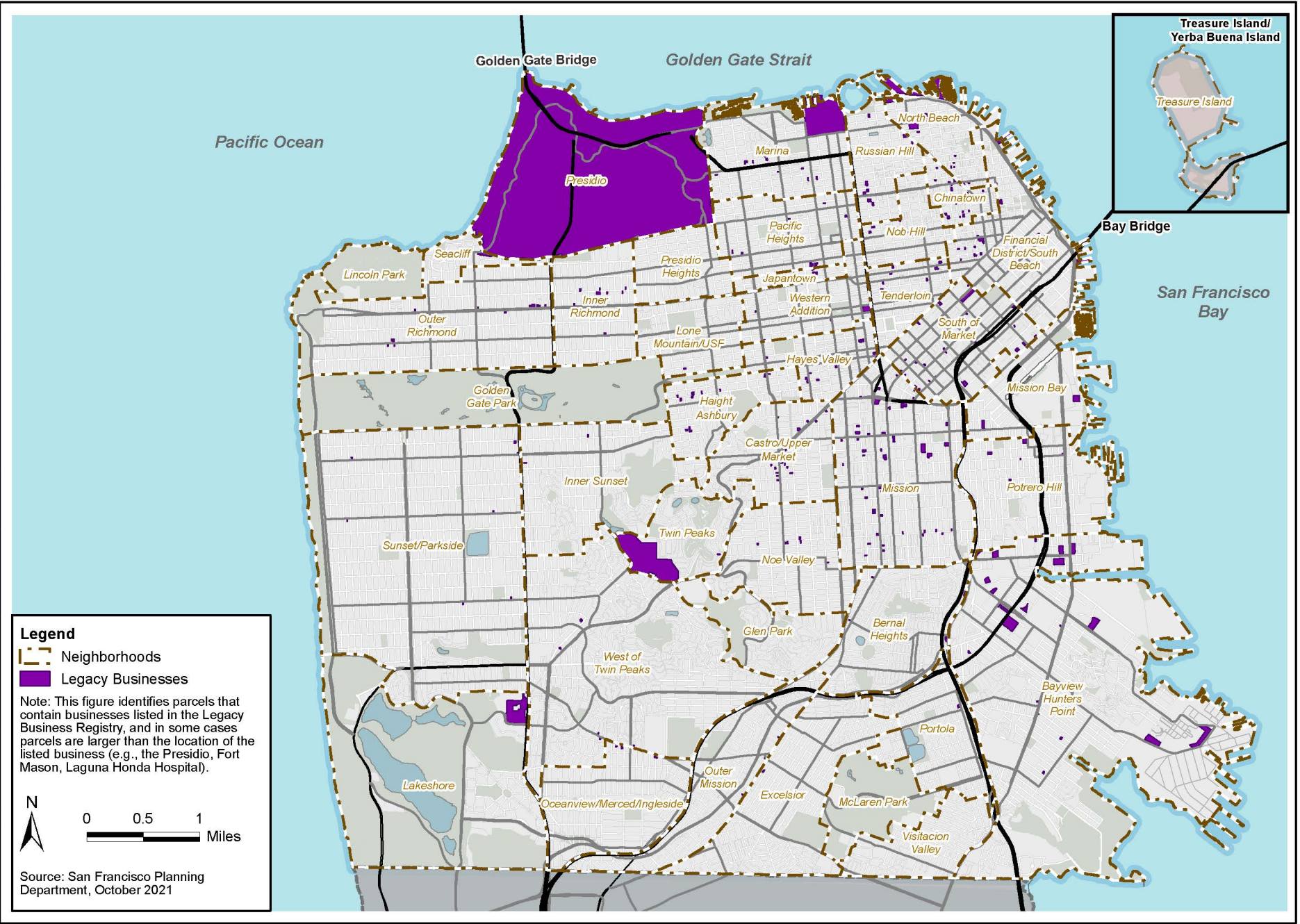
The San Francisco Cultural Resources Survey (SF Survey) is a historic context-based, multi-year cultural resources survey lead by the department that will result in the identification, documentation, and evaluation of sites and places of cultural and architectural importance across San Francisco. SF Survey aims to document San Francisco's architectural heritage while elevating the need to acknowledge the intangible aspects of the city's culture. This effort will be conducted through broad-scale, context-based research and make evaluations in consultation with community members for properties and assets with cultural and social associations. The results of SF Survey will help guide the department's decision making for future designations and other work. As of 2022, SF Survey is proposed for completion by 2026.

⁹⁴ Information from the draft *African American Citywide Historic Context Statement* indicates the census tract saw a substantial increase in African American residents in the decades after World War II. By 1970, this neighborhood was majority African American (63 percent of neighborhood residents compared with 13 percent of residents citywide).

⁹⁵ San Francisco Office of Small Business, 2022, Legacy Business Registry, <https://sfosb.org/legacy-business>, accessed March 23, 2022

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SF Survey will consist of the following interrelated components:

- **Community Engagement:** The SF Survey will rely heavily on input from community members and will involve various stakeholders and interests across the city. Through this level of engagement, the department seeks to ensure that aspects of the city's history important to respective community groups are shared according to the wishes of those knowledge bearers. The community engagement approach will seek to connect with community members at different stages of the public participation process: inform and consult; engage; collaborate; and empower.
- **Citywide Historic Context Statement:** The Citywide Historic Context Statement, begun in 2020, forms the foundation for future fieldwork and decision making for SF Survey. It builds upon the department's past historic context and survey efforts and incorporates recently completed and in-progress historic context statements. The Citywide Historic Context Statement aims to determine resource significance and rarity more accurately by examining sites thematically and on a citywide scale. The in-progress Citywide Historic Context Statement consists of contexts, sub-contexts, and themes, which are organized within three broad categories of Architectural, Cultural, and Thematic contexts. **Table 4.2-1**, p. 4.2-42, presents the completed and planned context statements as well as other informational studies that will be used by the department as informational tools to inform SF Survey's evaluation efforts. Each context statement will provide an evaluative framework that will establish significance, based on the California register and national register criteria. Each context's evaluative framework will also provide an integrity analysis to guide future determinations, such as allowing for lower integrity if a property is associated with significant events (particularly cultures and/or cultural events) and/or persons.
- **Cultural Resources Survey:** Historic resource determinations will be provided for all non-previously surveyed historic-aged properties across the city (i.e., 45 years or older at the conclusion of the SF Survey [constructed through 1980]).⁹⁶ Survey efforts will include both desktop and field data collection followed by comprehensive consideration of applicable evaluative frameworks from historic context statements, information submitted by the public, and additional research to substantiate findings.
- **Cultural Resources Inventory:** A customized, web-based cultural resources management platform will be used to collect and maintain survey data as well as provide a public website for sharing the results and information. The platform will serve as San Francisco's living Cultural Resources Inventory.

⁹⁶ Under CEQA, the department typically reviews properties that are more than 45 years old. Using those dates, the threshold of 1980 was established for in-field survey work. The context statements typical include a 1989 date as a defining moment in the city's history and the start of a new period of rebuilding. The SF Survey may also evaluate potentially significant properties up until the present date.

Table 4.2-1: Completed and Planned Historic Context Statements Informing the San Francisco Cultural Resources Survey

THEMATIC CONTEXTS						
Residential (1880-1989)	Commercial (1848-1989)	Industrial (1848-1989)	Government, Planning, and Infrastructure (1848-1989)	Private and Public Institutional (1848-1989)	Events that Shaped the City (1848-1989)	Other Contexts
<p>Single-Family</p> <ul style="list-style-type: none"> • Early Residential Development: 1848-1880 • Residence Parks • Sunset Residential Tracts (adopted 2014) • Developer Tracts: <ul style="list-style-type: none"> - Streetcar Suburbanization: 1880-1920 - Automobile Suburbanization: 1920-1950 - Post-World War II Suburbanization: 1950-1989 • Industrial Workers' Housing • Earthquake Shacks 	<p>Downtown Core</p> <ul style="list-style-type: none"> • Merchants, Leaders, and Commercial Identity • Hotels • Finance and Commerce <p>Neighborhood Commercial Districts</p>	<ul style="list-style-type: none"> • Regional Manufacturing, Shops, and Mills • Piers and Ports • Warehouse Districts/Design Districts • Labor History, Leaders, and Union Halls • Auto Row (adopted 2010) 	<p>Municipal & Federal Buildings</p> <ul style="list-style-type: none"> • Post Offices • Administrative Buildings • Fire Stations • Police Stations • Libraries <ul style="list-style-type: none"> - Carnegie Libraries - Appleton & Wolfard • Parks and Recreation Buildings <p>New Deal Era</p> <p>Military Presence</p> <ul style="list-style-type: none"> • Forts, Shipyards, and Civil Defense <p>Planning and Engineering</p> <ul style="list-style-type: none"> • Transit Infrastructure • Auto and Pedestrian Infrastructure • Waterfront Fill • Public Places • Redevelopment Agency • Parks and Recreation • Public Works • Water and Power Sub-Stations • Auxiliary Water Supply System 	<p>Houses of Spirituality</p> <ul style="list-style-type: none"> • Christian • Jewish/Muslim • Buddhist/Shinto • Hindu/Jain/Sikh • Additional Spiritual Sites <p>Recreation and Culture</p> <ul style="list-style-type: none"> • Cultural Institutions • Sporting • San Francisco Underground • Clubs and Social Halls <p>Private Education*</p> <p>Public Education*</p> <ul style="list-style-type: none"> • Golden Age of Schools <p>Health and Medicine*</p> <p>Burial and Memory</p> <ul style="list-style-type: none"> • Cemeteries and Columbaria • Funeral Homes <p>Mass Media and Communications</p> <ul style="list-style-type: none"> • Telegraph and Telephone Sites • Broadcast Stations • Newspapers and Publishing 	<ul style="list-style-type: none"> • Mid-Winter Fair • Marina and Panama-Pacific International Exposition (1848-1930) • Golden Gate International Exposition • 1906 Earthquake and Reconstruction • 1989 Loma Prieta Earthquake • Legislative Firsts 	<p>Artistic Expression</p> <ul style="list-style-type: none"> • Murals • Public Art • Statues • Literature and Music Sites <p>Landscapes</p> <ul style="list-style-type: none"> • Designed <ul style="list-style-type: none"> - Thomas Church Gardens - Lawrence Halprin • Historic/Vernacular • Cultural
<p>Multi-Family</p> <ul style="list-style-type: none"> • Flats and Small Apartments • SROs, Apartment Hotels, and Apartment Buildings • Single-Family Houses • Bungalow Courts, Courtyard Apartments, and Garden Apartments • Romeo Flats • Edwardian-era Flats 						

Yellow text indicates under contract, in-progress, or completed documentation. * Indicates Themes not yet identified.

CULTURAL CONTEXTS (by status)				ARCHITECTURAL CONTEXTS			
Adopted Contexts	In-Progress Contexts	In-Progress Data Collection	Planned Contexts	Construction Methods	Architectural Styles	Architectural Styles (cont'd.)	Architects, Builders, Developers, and Landscape Architects' Biographies
<ul style="list-style-type: none"> Japantown Cultural Heritage and Economic Sustainability Strategy (adopted 2014) LGBTQ Historic Context Statement (adopted 2015) Filipino Addendum to SoMa Historic Context Statement (adopted 2013) 	<ul style="list-style-type: none"> Latino Historic Context Statement African American Historic Context Statement Chinese-American Historic Context Statement Italian-American history documented through: <ul style="list-style-type: none"> North Beach Historic Context Statement Excelsior/Portola Historic Context Statement Russian Historic Context Statement Counter-Culture (Haight/Citywide National Register Multiple Property Documentation) 	<ul style="list-style-type: none"> Women's Rights Historic Context Statement Jewish history documented through: <ul style="list-style-type: none"> Russian Historic Context Statement Excelsior Portola Historic Context Statement German spreadsheet 	<ul style="list-style-type: none"> Irish American South Asian (India, Pakistan, Bangladesh, Sri Lanka) Southeast Asian (Thailand, Vietnam, Cambodia) Middle East/North Africa Pacific Islander <p>Priority</p> <ul style="list-style-type: none"> American Indian Historic Context Statement 	<ul style="list-style-type: none"> Rare Methods (i.e., Adobe, Skyscraper, Masonry Techniques) Unreinforced Masonry Buildings (adopted 1990) 	<p>Early Settlement Era Styles (1848-c.1880)</p> <ul style="list-style-type: none"> Late Adobe Vernacular/Folk Victorian Greek Revival Gothic Revival <p>Gilded Age Styles (c.1870-c.1900)</p> <ul style="list-style-type: none"> Italianate/Flat Front Italianate Queen Anne Stick/Eastlake Second Empire Richardsonian Romanesque <p>Late 19th and Early 20th Century Revival Styles (c.1890-1930)</p> <ul style="list-style-type: none"> English Revival Styles (Elizabethan, Tudor, Late Tudor, Georgian Revival, Storybook, Gothic Revival) Classical Revival Styles (Beaux Arts, Classical Revival, Neo-Classical, Greek Revival) Colonial Revival Styles (Colonial, Dutch Colonial) European Revival Styles (Norman, French Provincial, Italian Renaissance Revival, Venetian Revival, Romanesque Revival, Roman Renaissance Revival) Globally-Inspired (non-European) Revival Styles (Moorish, Islam, Tiki) 	<p>Architecture of the Progressive Era and Early 20th Century (c.1895-c.1935)</p> <ul style="list-style-type: none"> Edwardian Typology (Craftsman, Queen Anne, Prairie, Classical Revival) American and California Styles (Craftsman, Arts & Crafts, Prairie, Chicago Style, Early 20th Century American Commercial, Sullivanesque, First Bay Tradition, Second Bay Tradition) Spanish and Mediterranean Revival Styles (Spanish Colonial Revival, Mediterranean Revival, Churrigueresque) Modernistic Styles (Art Deco, International, Streamline Moderne, WPA Art & Architecture) <p>Modern Architecture and Landscapes (1935-1970) (adopted 2011)</p> <ul style="list-style-type: none"> Minimal Traditional, Contractor Modern, Mid-Century Modern, Google, Contractor Mod., Eichlers, Ranch, Corporate/Miesian Modernism <p>Modern Addendum (1960-2000)</p> <ul style="list-style-type: none"> New Formalism, Brutalism, Third Bay Tradition, Late French Provincial, Post-Modernism 	<ul style="list-style-type: none"> Education, firm history, and known projects in SF and the Bay Area Women architects to be indexed Architects to be indexed by associated culture/heritage

Yellow text indicates under contract, in-progress, or completed documentation.

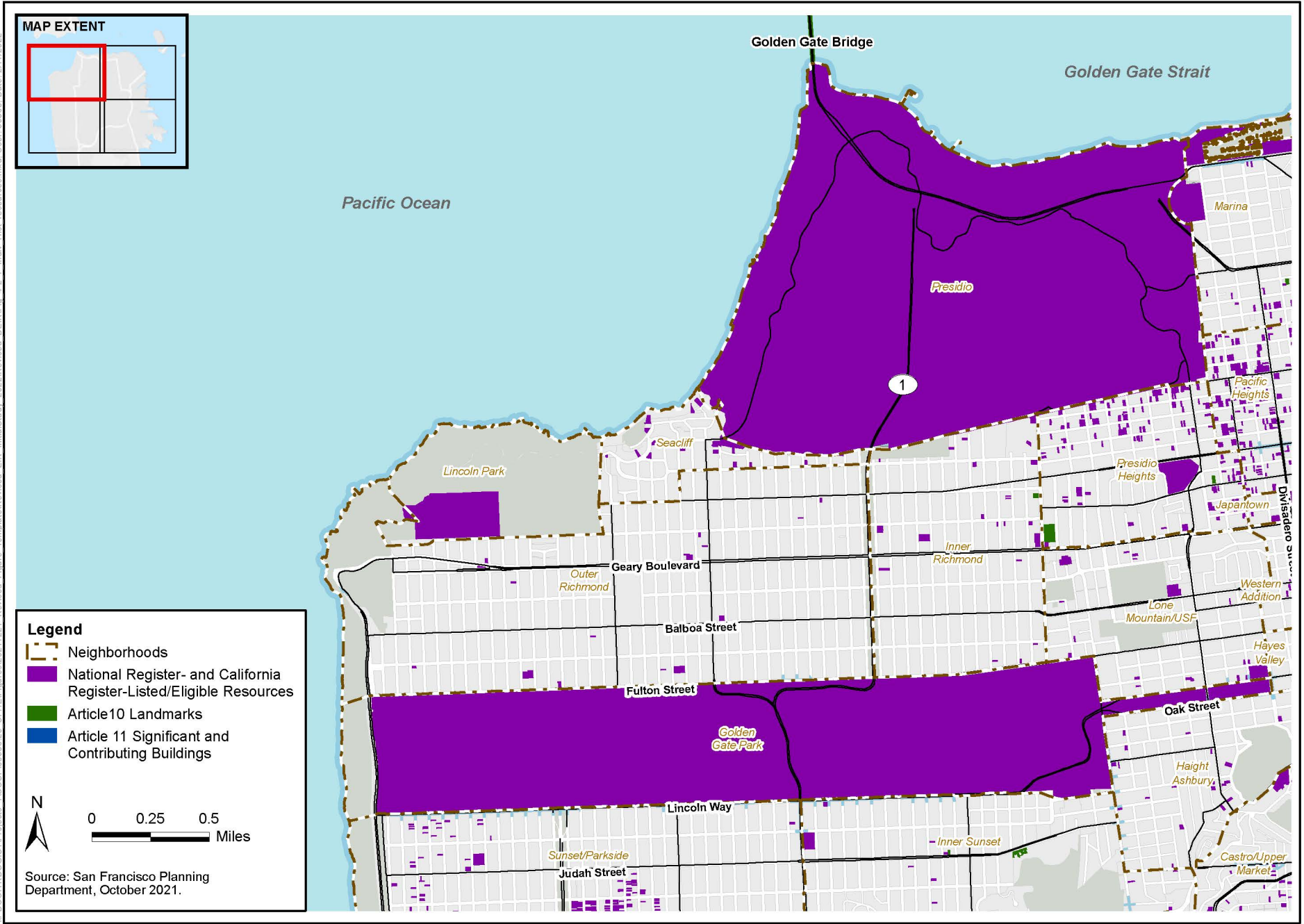
2021 Built-Environment Historic Resources Setting

The various built-environment historic resource investigations and designations the city, other agencies, and community members have initiated since the 1960s, as described in the preceding sections, have resulted in the city containing thousands of buildings, structures, objects, historic districts, and cultural landscapes that qualify as historic resources. Such resources are significant because they have architectural value or because they are closely associated with important community history and neighborhood development, the accomplishments of influential individuals, or patterns of events that have had made a noted imprint on the city's social and physical development.

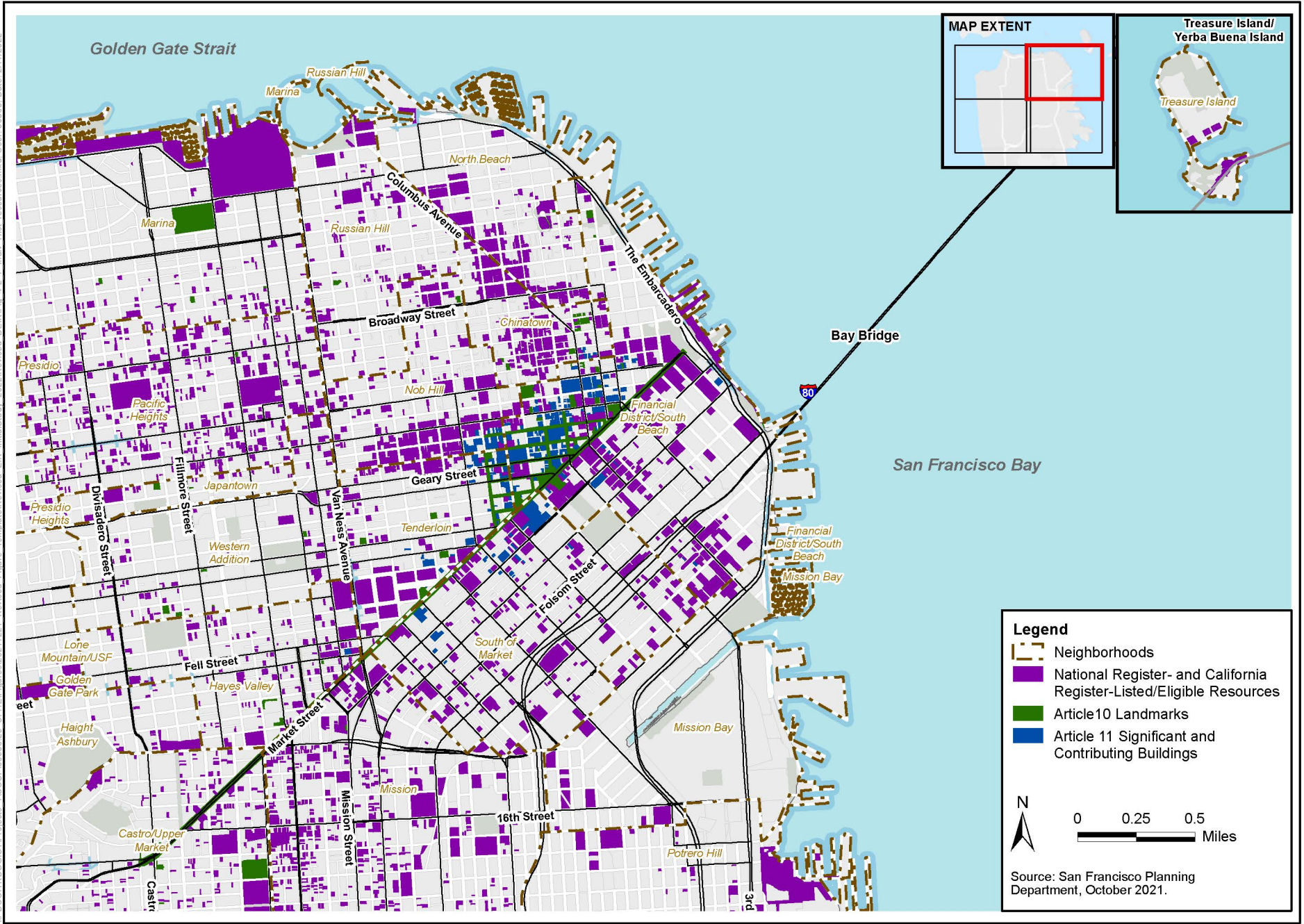
The built characteristics of San Francisco's neighborhoods vary considerably. Some are densely built with residential and commercial buildings, while others contain detached homes and neighborhood commercial districts or, in some cases, large-scale industrial or production facilities. Neighborhoods also vary in their demographic characteristics, which have resulted from complex settlement and social patterns throughout the city's history. Each of San Francisco's neighborhoods has its own profile of historic resource types, ages for its building stock, and significant historical associations. Narrative descriptions of the development histories and built-environment character of each of the 41 neighborhoods are presented in Appendix F.1, Table F-2, of this EIR.

Figures 4.2-7a through **4.2-7d** show the locations of known individual built-environmental historic resources in San Francisco, including listed or eligible California register and national register resources, landmarks designated under article 10, and article 11 significant and contributing buildings. Similarly, **Figures 4.2-8a** through **4.2-8d**, pp. 4.2-49 through 4.2-52, show the locations of previously identified national register and California register listed and eligible districts, as well as landmark districts designated under article 10 and conservation districts designated article 11.

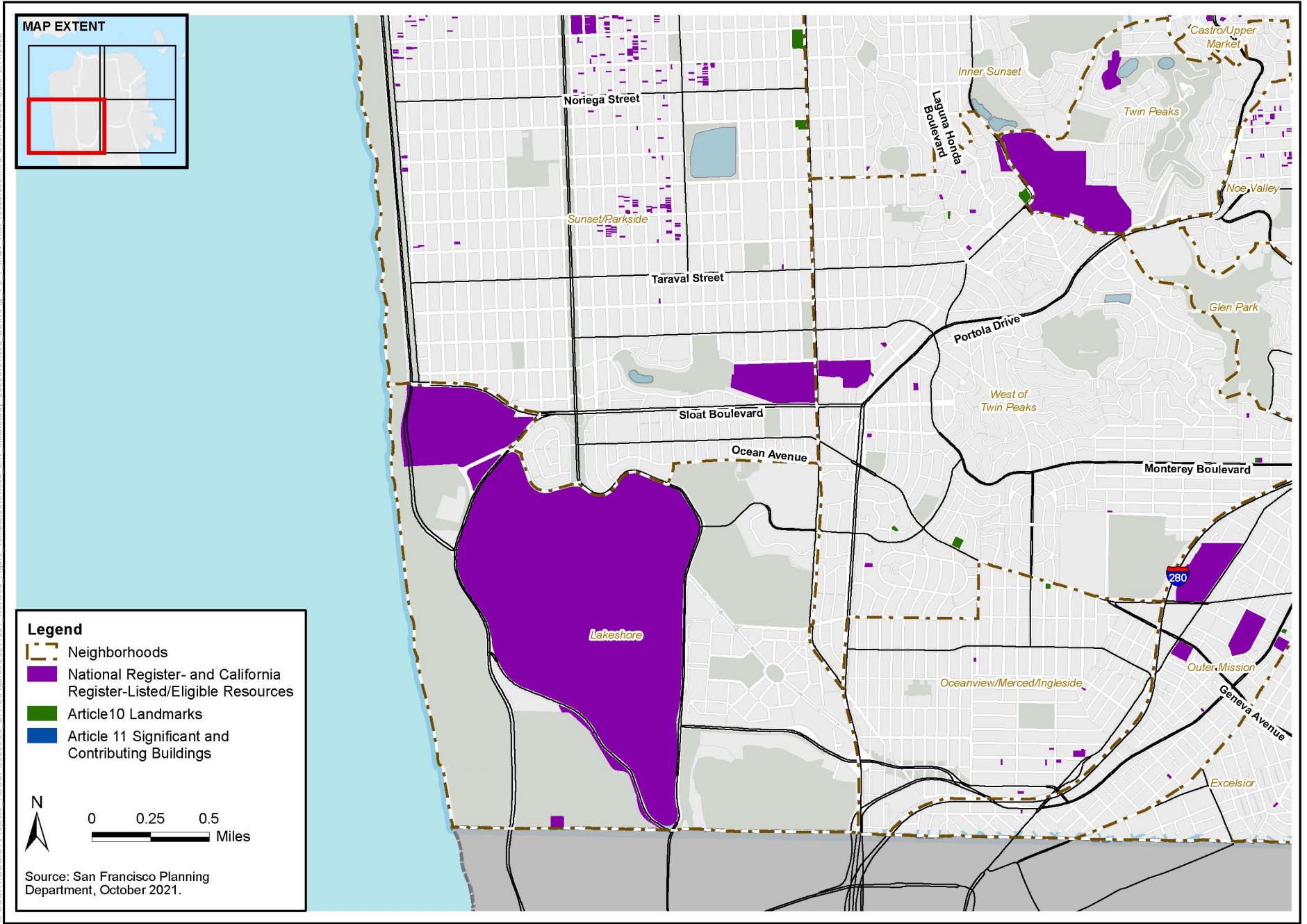
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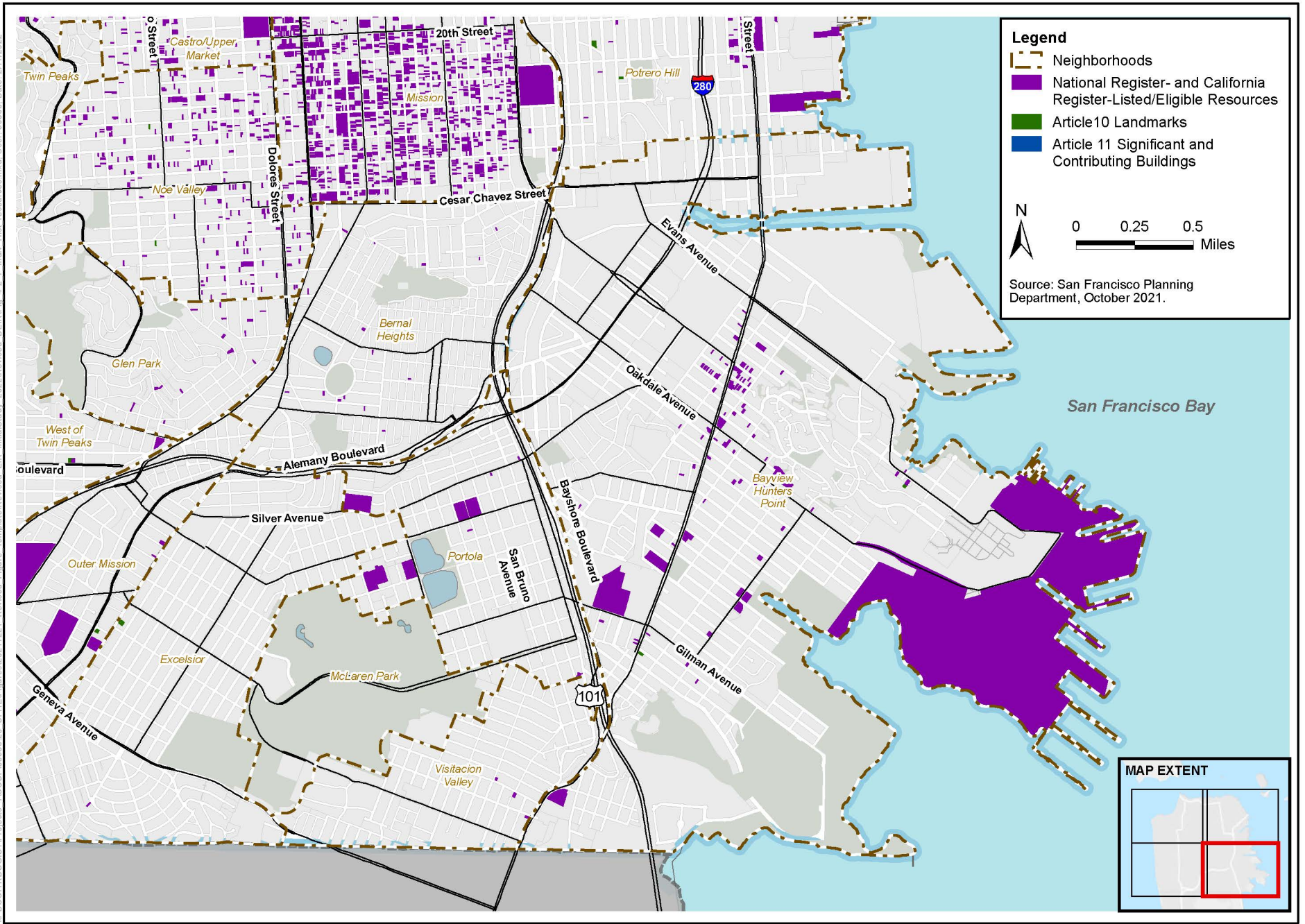
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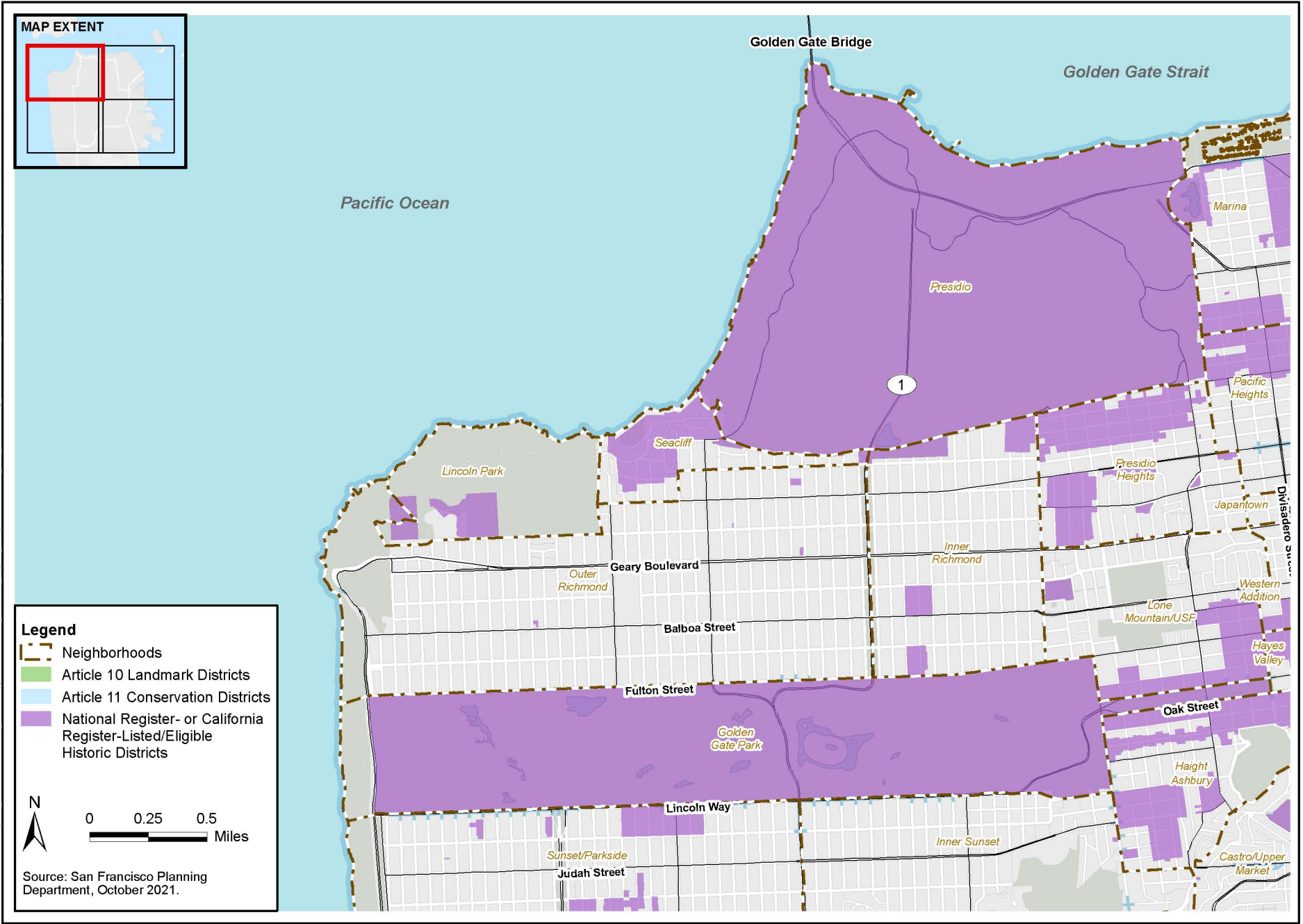
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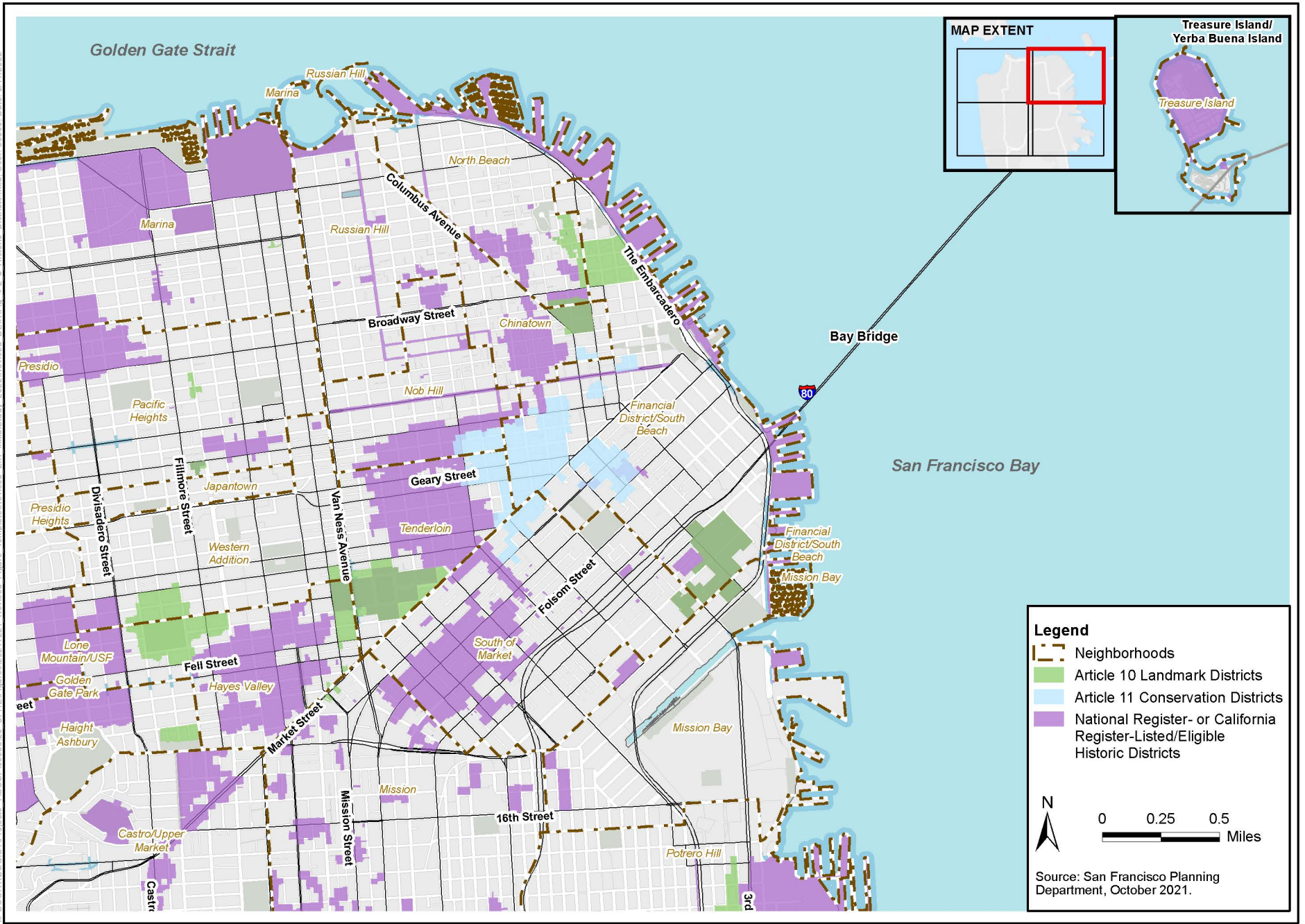
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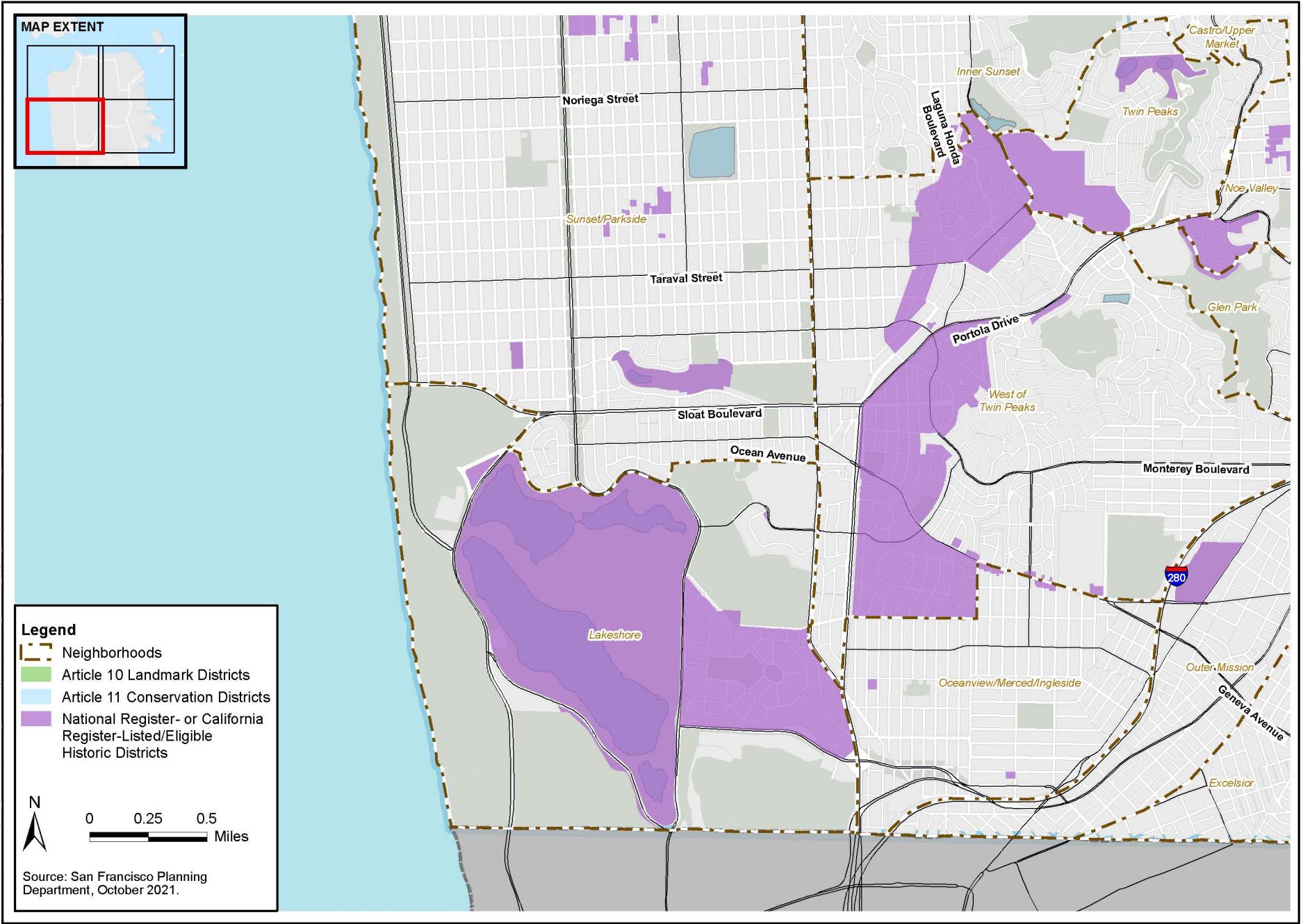
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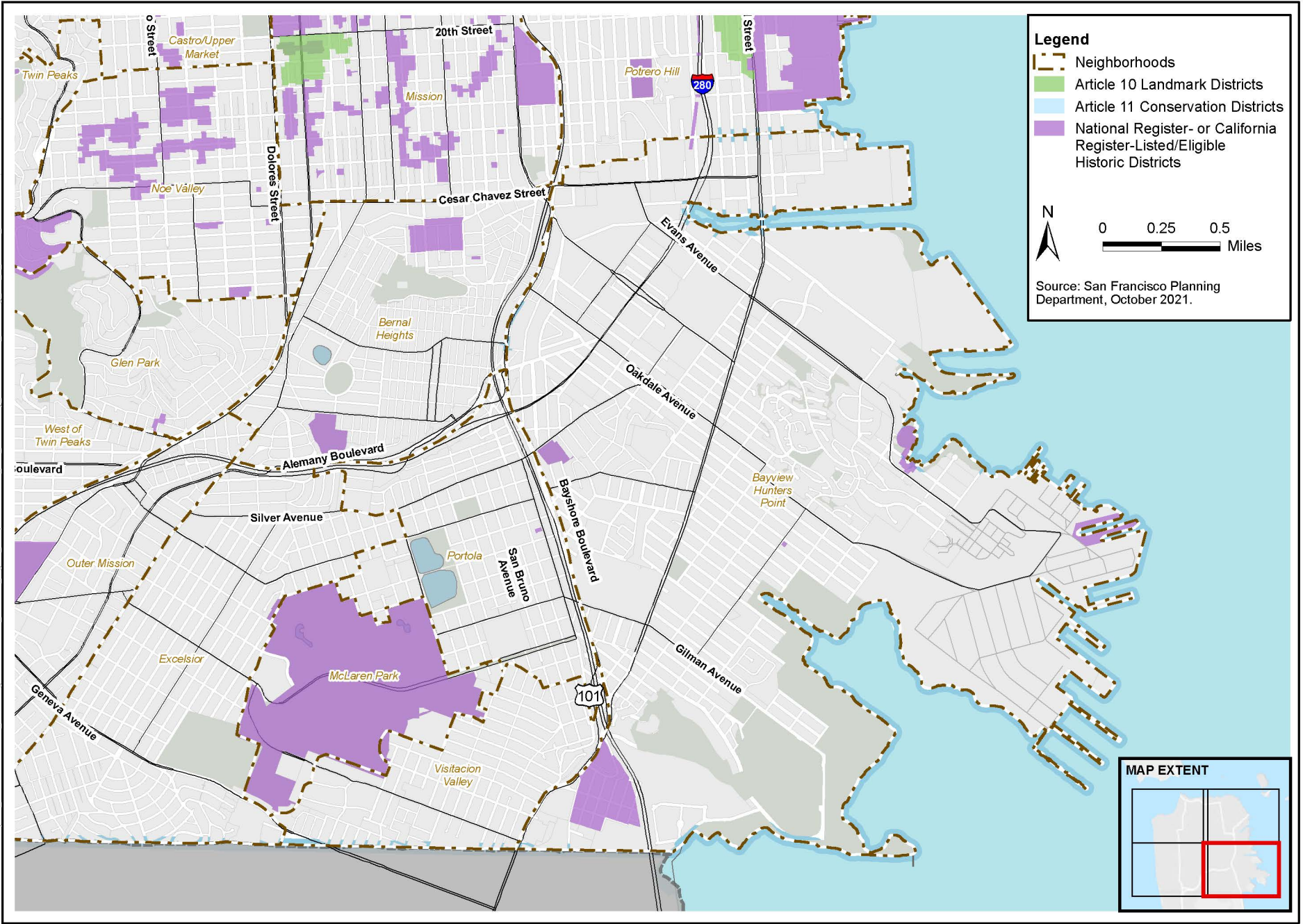
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Although many of the known individual historic resources and historic districts in San Francisco were previously evaluated as historic resources primarily due to their formal architectural or landscape design characteristics, others were identified as historic resources due to their associations with San Francisco's diverse communities, including American Indian, Black, Japanese, Filipino, Chinese, Latino/e/x, and LGBTQ+ groups. **Figure 4.2-9** shows the locations of a portion of the known built-environment historic resources that have significant social and cultural associations with marginalized communities. The department has identified these historic resources by reviewing existing designations and a subset of historic resource evaluation documents. Some identified properties were explicitly recognized for their connections to a cultural group at the time of designation; others were recognized for their architectural merit, but the evaluation contains language that suggests an additional significant association with a specific cultural group. Individual resources were identified from among properties listed in the national register and article 10; historic districts were identified from all districts formally listed in or found eligible for listing in the national register, California register, and articles 10 and 11. Evaluations of national register and California register eligibility for individual resources (typically required by the department to support the environmental review process) have not yet been reviewed to assess association with social and cultural groups and are not reflected on **Figure 4.2-9**. Furthermore, this figure does not include properties identified through cultural district designation, in historic context statements, and through the Legacy Business Registry that have not previously received formal evaluation or designation.

2050 Built-Environment Historic Resource Forecast

Additional individual built-environment historic resources and historic districts are anticipated to be identified in the future as new projects are proposed that require historic resource evaluation, new surveys are conducted, and additional built-environment resources reach the 45-year age threshold.

This discussion establishes a projection, or forecast, that anticipates how the city's built-environment historic resources setting will evolve over the next approximately 30 years while development implements the policies of the housing element update. Environmental impacts are assessed against a forecast rather than the current setting, which contains only a portion of the resources that could be affected through 2050. This discussion summarizes the anticipated historic resource identification process that will be in place in future years as well as the supporting tools that are expected to inform future identification of historic resources—specifically, the department's existing CEQA review process, the in-progress SF Survey, and the San Francisco Cultural Districts Initiative, which recognizes places and sites with strong associations to the city's cultural communities. This forecast additionally assumes that direction in historic preservation commission resolution 1127 and the guidelines of SF Survey, which centers the department's historic preservation work program and resource allocation on racial and social equity, will result in an increase of identification of culturally significant resources associated with communities of color and other marginalized groups. The 2050 historic resource forecast then presents information by neighborhood to predict the volume of built-environment historic resources that may be identified in each of San Francisco's neighborhoods by 2050.

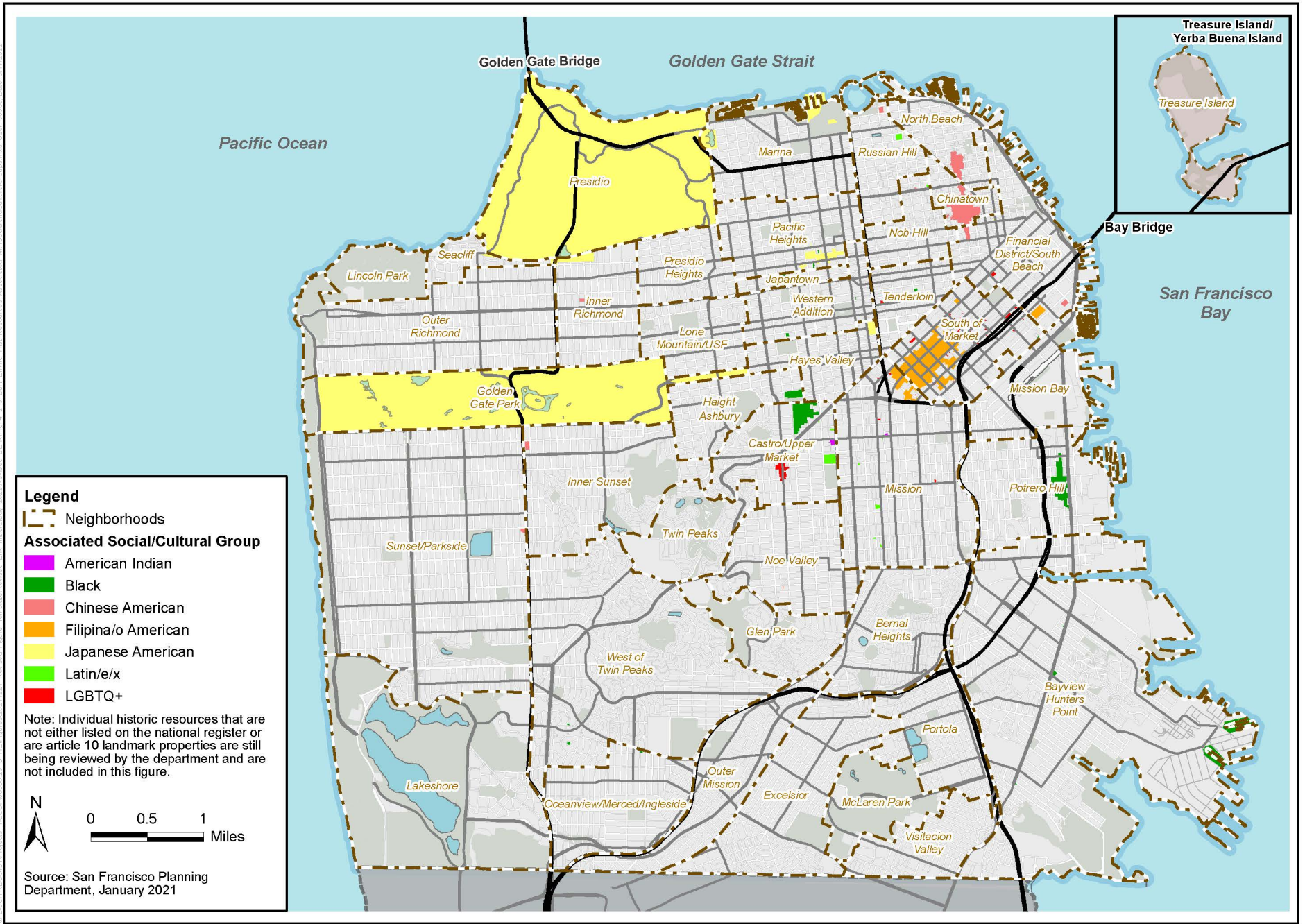


Figure 4.2-9
Built-Environment Historic Resources
Associated with Social and Cultural Groups

2050 Built-Environment Historic Resource Forecast by Neighborhood

The department anticipates that the evaluative tools and processes described above will result in the identification of additional significant built-environment historic resources throughout San Francisco continuing to 2050. Resources may be identified as part of SF Survey, other department or community-initiated surveys, national register or California register nominations, the department's project-level CEQA review process, or future article 10 and article 11 designations. The total amount of built-environment historic resources identified by 2050 represents the 2050 setting for built-environment resources, referred to here as the 2050 built-environment historic resources forecast.

Table 4.2-2 characterizes the 2050 built-environment historic resources forecast by neighborhood. For each of San Francisco's 41 neighborhoods, the table provides the percentage of parcels in each neighborhood that currently contain known built-environment historic resources, including historic district contributors, that have been identified as significant in past surveys, designations, and other evaluative efforts. These are the properties that the department assigns to Category A, as described under "2021 Built-Environment Resource Conditions." A high percentage of parcels that qualify as historic resources does not necessarily mean that a certain neighborhood has greater historic value than others. Rather, this could suggest that a neighborhood has undergone department- or community-initiated surveys, historic context statement, or designation efforts, or a neighborhood may have experienced greater development in recent decades that has led to more project-level evaluations conducted as part of the department's environmental review process. Furthermore, a high percentage of historic resources may also indicate the neighborhood contains resource types, such as architecturally ornate residences or commercial buildings, that some past surveys prioritized.

Furthermore, **Table 4.2-2** presents the percentage of parcels containing resources that are currently at least 45 years old but have not yet been evaluated through an adopted survey or project-level review; therefore, the historic resource status of these historic-aged resources is currently unknown, and the department classifies them as Category B properties. The table also includes the percentage of currently not-age eligible parcels (or classified as Category C properties) in each neighborhood that will reach 45 years of age by 2050. Combining these two percentages yields the total volume of currently unevaluated resources in each neighborhood that will be of historic age by 2050 and may be subject to historic resource evaluation during the intervening period. This is a representative estimate and does not take into account the likelihood that some properties may be demolished before reaching 45 years of age or otherwise not evaluated. In other words, this forecast assumes that all current historic-aged parcels and all parcels containing resources that will become of historic age by 2050 will be evaluated by that year.

Table 4.2-2: Neighborhood-Level 2050 Built-Environment Historic Resource Forecast

Neighborhood^a	Percentage of Parcels Containing Identified Historic Resources in 2021	Percentage of Historic-Aged Parcels Not Yet Evaluated in 2021	Percentage of Unevaluated Parcels Becoming Historic Aged by 2050	Estimated Percentage of Parcels that May Be Newly Identified as Historic Resources by 2050^b	Percentage of Parcels within Cultural Districts and Enclaves	Parcels in Cultural Districts or Enclaves Likely to Be Historic Resources^c	Estimated Total Percentage of Parcels Containing Historic Resources by 2050^d
Bayview Hunters Point	7%	74%	16%	13%	93%	6%	25%
Bernal Heights	3%	87%	6%	13%	< 1%	< 1%	17%
Castro/Upper Market	15%	76%	5%	11%	44%	3%	29%
Chinatown	58%	38%	2%	6%	< 1%	< 1%	64%
Excelsior	< 1%	95%	4%	14%	0%	0%	14%
Financial District/ South Beach	59%	23%	7%	4%	21%	1%	64%
Glen Park	3%	87%	7%	13%	0%	0%	16%
Golden Gate Park*	50%	33%	0%	5%	0%	0%	55%
Haight Ashbury	43%	55%	1%	8%	4%	<1%	51%
Hayes Valley	69%	23%	3%	4%	62%	4%	76%
Inner Richmond	6%	87%	5%	13%	53%	3%	22%
Inner Sunset	< 1%	90%	8%	14%	0%	0%	14%
Japantown	13%	73%	12%	12%	72%	4%	29%
Lakeshore	58%	40%	1%	6%	< 1%	< 1%	63%
Lincoln Park*	5%	95%	0%	13%	0%	0%	18%
Lone Mountain/USF	28%	67%	4%	10%	0%	0%	38%
Marina	32%	62%	3%	9%	0%	0%	41%

Neighborhood ^a	Percentage of Parcels Containing Identified Historic Resources in 2021	Percentage of Historic-Aged Parcels Not Yet Evaluated in 2021	Percentage of Unevaluated Parcels Becoming Historic Aged by 2050	Estimated Percentage of Parcels that May Be Newly Identified as Historic Resources by 2050 ^b	Percentage of Parcels within Cultural Districts and Enclaves	Parcels in Cultural Districts or Enclaves Likely to Be Historic Resources ^c	Estimated Total Percentage of Parcels Containing Historic Resources by 2050 ^d
McLaren Park*	1%	90%	9%	14%	0%	0%	15%
Mission	40%	24%	4%	4%	42%	2%	46%
Mission Bay	13%	56%	6%	9%	0%	0%	21%
Nob Hill	27%	67%	3%	10%	0%	0%	37%
Noe Valley	21%	69%	4%	10%	6%	< 1%	32%
North Beach	40%	54%	4%	8%	0%	0%	48%
Ocean View/Merced/ Ingleside	1%	94%	5%	14%	100%	6%	20%
Outer Mission	< 1%	93%	5%	14%	< 1%	< 1%	14%
Outer Richmond	< 1%	92%	6%	14%	< 1%	0%	14%
Pacific Heights	32%	63%	3%	9%	19%	1%	42%
Portola	< 1%	90%	8%	14%	< 1%	< 1%	14%
Potrero Hill	9%	70%	15%	12%	0%	0%	21%
Presidio*	47%	47%	0%	7%	0%	0%	54%
Presidio Heights	42%	52%	3%	8%	0%	0%	50%
Russian Hill	9%	84%	4%	12%	0%	0%	21%
Sea Cliff	39%	59%	1%	8%	0%	0%	47%
SoMa	46%	17%	1%	2%	94%	6%	54%
Sunset/Parkside	4%	84%	2%	12%	93%	6%	21%

Neighborhood ^a	Percentage of Parcels Containing Identified Historic Resources in 2021	Percentage of Historic-Aged Parcels Not Yet Evaluated in 2021	Percentage of Unevaluated Parcels Becoming Historic Aged by 2050	Estimated Percentage of Parcels that May Be Newly Identified as Historic Resources by 2050 ^b	Percentage of Parcels within Cultural Districts and Enclaves	Parcels in Cultural Districts or Enclaves Likely to Be Historic Resources ^c	Estimated Total Percentage of Parcels Containing Historic Resources by 2050 ^d
Tenderloin	84%	11%	1%	2%	12%	1%	87%
Treasure Island	100%	0%	0%	0%	0%	0%	100%
Twin Peaks	< 1%	92%	5%	14%	13%	1%	15%
Visitacion Valley	< 1%	89%	6%	13%	< 1%	0%	13%
West of Twin Peaks	21%	75%	3%	11%	< 1%	0%	32%
Western Addition	30%	53%	11%	9%	63%	4%	42%

Source: San Francisco Planning Department, October 2021.

Notes: Percentages have been rounded.

^a The neighborhoods listed above are based on 2010 census tracts. Those marked with an “*” encompass large parks, but the neighborhood boundaries also include some adjacent parcels outside of park boundaries, which are included in the above percentages.

^b The percentages in this column represent 14 percent of the parcels that will be of historic age in 2050 and that were not yet subject to evaluation in 2021.

^c The percentages in this column represent 6 percent of the parcels in each neighborhood that are located within identified cultural districts and cultural enclaves.

^d The percentages in this column represent the sum of the following: percentage of parcels containing known built-environment historic resources in 2021; percentage of parcels forecast to contain newly identified built-environment historic resources in 2050, consistent with a past 14 percent positive evaluation rate; and percentage of additional parcels forecast to contain newly identified built-environment historic resources in 2050 due to their location in cultural districts/enclaves and likelihood of containing historic resources associated with social and cultural groups.

The department has identified 14 percent as the percentage of historic-aged parcels in San Francisco that are known to contain significant historic resources, based on the results of past evaluation and designation efforts; the department assumes this rate of affirmative findings will remain relatively consistent in future surveys, designations, and evaluations before factoring in the department's increased focus on culturally significant historic resources. The department acknowledges an expected increase in identification of culturally significant resources in order to meet racial and social equity policies and this increase is factored into the 2050 historic resource forecast as outlined below. Therefore, as an initial assumption to establish the 2050 historic resource forecast, the department assumes a 14 percent affirmative finding rate for future historic resource evaluations occurring between 2021 and 2050. The column in **Table 4.2-2**, p. 4.2-56, entitled "Estimated Percentage of Parcels that May Be Identified as Historic Resources by 2050" contains the 14 percent affirmative evaluation rate applied against the percentage of currently unevaluated parcels in each neighborhood that will be of historic age by 2050.

It is not possible to anticipate how many resources evaluated in the future will be significant for their architectural or design characteristics versus significant for associations with the social history and cultural heritage of San Francisco's communities. However, the department anticipates that the number of built-environment resources recognized as significant based on their community, cultural, or heritage associations will continue to increase. This would most likely result from implementation of the department's racial and social equity policies as summarized in HPC resolution 1127, the completion of several social and cultural context statements currently in progress, SF Survey's heightened focus on social and cultural historic contexts and community engagement, and the expansion of municipal cultural heritage programs. **Table 4.2-2**, notes the percentage of parcels within each neighborhood that fall within an existing or proposed cultural district or enclave. Because cultural districts and enclaves reflect the existence of place-based social and cultural contexts, those contexts are expected to inform evaluations of resources in the future. The department has identified six percent as the current average percentage of parcels within cultural districts that contain identified cultural assets, which may qualify as significant historic resources when evaluated in the future. The column "Parcels in Cultural Districts or Enclaves Likely to Be Historic Resources" represents six percent of a neighborhood's parcels that are within cultural districts or enclaves.

The final column of **Table 4.2-2** provides the percentage of total parcels within a neighborhood that are anticipated to contain significant historic resources by 2050. This percentage includes historic resources already identified as of 2021 as well as those that may be reasonably expected to contain significant historic resources by 2050. Differences among neighborhoods may result from numerous factors, including the volume of past evaluations in a neighborhood, the age of its building stock, and the presence of cultural districts and enclaves that may result in identification of historic resources, based on cultural heritage.

2021 Conditions Compared to 2050 Environmental Baseline Conditions

This discussion of the proposed action's environmental setting also considers the number of housing units in each of San Francisco's neighborhoods in 2021 compared to the 2050 environmental baseline. The comparison presents which neighborhoods are anticipated to experience the most development under the 2050 environmental baseline. The estimated percentage of parcels in each neighborhood that could contain historic

resources in 2050, which is first presented in **Table 4.2-2**, supports an understanding of the neighborhoods in which the greatest number of built-environment resources could be demolished or altered if the housing element update is not adopted. **Table 4.2-3** presents the total number of housing units by neighborhood under 2021 conditions, under the 2050 environmental baseline, and the difference in housing units between 2021 conditions and the 2050 environmental baseline. The table also includes the estimated percentage of a neighborhood’s parcels anticipated to contain built-environment historic resources by 2050, based on the 2050 neighborhood-level forecast described previously. Due to the development constraints for historic resources used in baseline modeling, the estimated percentage of parcels in each neighborhood containing historic resources in 2050 does not factor in the potential demolition of historic resources between 2021 and 2050. As a result, this percentage is a conservative representation of how many built-environment historic resources may be present in each neighborhood in 2050; the actual percentage could be lower if built-environment historic resources are demolished in the future to accommodate new housing units or other forms of construction.

Table 4.2-3: Housing Units by Neighborhood under 2050 Environmental Baseline Compared to 2021 Conditions

Neighborhood ^a	2021 Housing Units ^b	Number of Housing Units Anticipated in 2050 Environmental Baseline	Change between 2021 Conditions and 2050 Environmental Baseline	Estimated Total Percentage of Parcels Containing Built-Environment Historic Resources by 2050 ^c
Bayview Hunters Point	17,000	32,300	15,300	25%
Bernal Heights	9,900	10,100	200	17%
Castro/Upper Market	11,700	11,900	200	29%
Chinatown	7,600	7,700	100	64%
Excelsior	11,300	11,700	400	14%
Financial District/ South Beach	17,300	28,000	10,700	64%
Glen Park	3,800	3,800	0	16%
Golden Gate Park	0	0	0	55%
Haight Ashbury	8,700	8,700	0	51%
Hayes Valley	10,400	11,900	1,500	76%
Inner Richmond	9,700	9,800	100	22%
Inner Sunset	12,500	12,900	400	14%
Japantown	2,500	2,900	400	29%
Lakeshore	8,000	19,100	11,100	63%
Lincoln Park*	100	100	0	18%
Lone Mountain/USF	6,600	6,800	200	38%
Marina	14,700	14,900	200	41%

Neighborhood ^a	2021 Housing Units ^b	Number of Housing Units Anticipated in 2050 Environmental Baseline	Change between 2021 Conditions and 2050 Environmental Baseline	Estimated Total Percentage of Parcels Containing Built-Environment Historic Resources by 2050 ^c
McLaren Park*	200	200	0	15%
Mission	27,500	37,700	10,200	46%
Mission Bay	7,100	10,400	3,300	21%
Nob Hill	16,500	17,000	500	37%
Noe Valley	11,100	11,200	100	32%
North Beach	7,000	7,100	100	48%
Ocean View/Merced/ Ingleside	8,000	8,200	200	20%
Outer Mission	7,100	7,700	600	14%
Outer Richmond	19,600	19,900	300	14%
Pacific Heights	14,200	14,300	100	42%
Portola	4,800	5,000	200	14%
Potrero Hill	8,400	16,800	8,400	21%
Presidio	1,200	1,200	0	54%
Presidio Heights	5,100	7,000	1,900	50%
Russian Hill	10,400	10,600	200	21%
Sea Cliff	1,000	1,000	0	47%
SoMa	18,300	32,200	13,900	54%
Sunset/Parkside	28,600	29,600	1,000	21%
Tenderloin	20,000	22,100	2,100	87%
Treasure Island	700	10,900	10,200	100%
Twin Peaks	3,700	3,700	0	15%
Visitacion Valley	5,800	6,800	1,000	13%
West of Twin Peaks	15,000	16,800	1,800	32%
Western Addition	13,900	18,600	4,700	42%

Source: San Francisco Planning Department, October 2021; San Francisco Planning Department's TAZ-level modeling, 2021.

Notes:

- ^a The neighborhoods listed above are based on 2010 census tracts. Those marked with an "*" encompass large parks, but the neighborhood boundaries also include some adjacent housing outside of park boundaries, which accounts for housing units identified in those neighborhoods.
- ^b Numbers have been rounded and will not sum to the total.
- ^c Percentages have been rounded.

Of the approximately 100,000 new housing units anticipated in the 2050 environmental baseline, approximately 70,800 units are currently in the development pipeline. This means the projects that will produce those units are under construction, have approved building permits, or are in varying stages of review for building permit approval. Most of the approximately 30,000 housing units that are anticipated in 2050 environmental baseline conditions but are not currently in the pipeline would be located in the Financial District/South Beach, Lakeshore, Mission, SoMa, Treasure Island, and Western Addition neighborhoods.

As presented in the table, neighborhoods in which the greatest number of housing units would be constructed under 2050 environmental baseline conditions are in the eastern half of the city (i.e., Bayview-Hunters Point, the Mission, and SoMa). Other neighborhoods with a comparatively high number of new housing units are toward the western edge of San Francisco and include the Lakeshore, Sunset/Parkside, and Outer Richmond neighborhoods. When viewed against the volume of historic resources that are anticipated to be identified through 2050, neighborhoods such as the Financial District/South Beach, Lakeshore, Mission, SoMa, and Treasure Island have comparatively high percentages of anticipated historic resources and are anticipated to receive a comparatively high number of housing units under the 2050 environmental baseline.

ARCHEOLOGICAL RESOURCES

The environmental setting regarding archeological resources for the proposed action summarizes what is presently known about the distribution of archeological resources in San Francisco based on prior archeological work, archival research, and archeological modeling to understand the archeological character of the city and the potential to encounter both known and undiscovered archeological sites.⁹⁷ The archeological sensitivity assessment considered existing literature, archival city maps, historical maps, geotechnical reports, updated archeological records, archeological reports, and existing archeological site records. The archeological setting and history of San Francisco are discussed in detail in the archeological assessment prepared for the proposed action (see Appendix F.2 of this EIR).

Most archeological investigations within San Francisco have been driven by development, which limits the understanding of how archeological resources are distributed across the city. In addition to the constraints of development-based identification, CEQA was not enacted until 1970 and a decade (or more) elapsed before municipalities began to consider archeological impacts routinely. For this reason, construction that included deep soil disturbance prior to the 1980s was often conducted without consideration or documentation of archeological resources. Many resources very likely were destroyed or substantially damaged during that period along with any data regarding the nature of these resources.

The environmental setting discussion reviews Native American and historic-period archeological research issues, including pertinent research questions and site types needed to address these research questions. Human remains are also included in the discussion below. The discussion then presents the archeological sensitivity by planning district and an overview of both Native American and historic-period archeological sensitivity. As summarized above and described in Chapter 4, Environmental Setting and Impacts, this EIR uses a future 2050

⁹⁷ For archeological resources, *existing conditions* is defined as the conditions in 2020, the year for which the most recent applicable data are available.

environmental baseline for analysis of impacts of the proposed action. This setting discussion concludes with a discussion of archeological resources summarized by planning district under the 2050 environmental baseline.

Research Questions and Site Types

The following research themes, in **Table 4.2-4** and **Table 4.2-5**, p. 4.2-65, identify important questions that may be addressed by the types of resources and kinds of data that can be encountered in the city. Research themes are used to outline both the questions that can be asked of the archeological record and the types of data required to answer them. The purpose of identifying relevant research themes is to help predict areas of special concern within the city that might reasonably be present and guide the methods and strategies of archeological sensitivity analysis and archeological investigation. A series of research topics regarding Native American and historic-period archeological contexts, which also includes human remains, were developed in the archeological sensitivity assessment prepared for the proposed action (Appendix F.2 of this EIR) and are summarized here.

Table 4.2-4: Native American Archeological Research Topics

Research Topics	Summary	Site Types
Human Occupation and Landscape Evolution	Native American archeological deposits have typically been found in association with previously stable landforms or <i>paleosols</i> ^a that were later buried during periods of landform instability. Due to changes in landforms and rising sea levels, buried Native American archeological deposits may exist within the dune sands that previously covered San Francisco. In addition, older deposits, inundated during the period in which San Francisco Bay was created by rising sea level, starting at the end of the last Ice Age, may exist below sea level.	Archeological deposits buried in dunes or under creek or pond alluvium or submerged under Young Bay Mud; non-archeological deposits in the same settings that may preserve organic materials informative of past landscapes
Culture Chronology and History	Interpretation of historical relationships through the classification of stylistic and technological culture traits, which provide a relative chronological framework for the investigation of other research themes. Datable materials within a relatively intact stratigraphic sequence will assist in the development of reliable interpretations of site components.	Stratified and dateable deposits or multiple single component deposits
Subsistence Patterns	Variability in both the temporal and spatial distribution of archeofaunal and paleoethnobotanical assemblages has been noted within the San Francisco Bay Area. Explanations for temporal variations range from climate/environmental changes to resource intensification, but additional research is necessary to better understand the drivers of change.	Archeological deposits that yield relative or absolute dates and that preserve organic materials

Research Topics	Summary	Site Types
Coastal Colonization Patterns	The traditional view of the early Californian inhabitants is one that emphasizes the Paleo-hunters, but more recent research has shown that Paleo-Indian and Lower Archaic peoples showed a preference for lacustrine, estuarine, and island environments and exploited a range of coastal resources.	Deposits along the prehistoric bay shore and the coast
Resource Intensification and Adaptive Change	Archeological investigations seek to determine the causes and consequences of resource intensification by Native American groups, including the connection between resource intensification and population growth, increased sedentism, and increased social stratification.	Deposits that preserve faunal and floral material and technological assemblages indicative of diet and organization, major well-stratified deposits
Intergroup Interaction and Social Change	Inside culture represents a group’s internal lifeways, and boundary culture represents the processes by which groups interact with other groups. The development of boundary culture seen through material culture may have resulted in increased social stratification.	Multiple sites of similar date, stratified sites, sites that include human remains, sites that include identifiable trade or exchange markers
Research Potential of Redeposited Sites	Historic cutting and filling within San Francisco have affected many Native American sites; however, a single-component redeposited site may possess sufficient material to allow investigators to address important research questions.	Single component deposits that preserve material that yields relative or absolute dates in combination with other data classes, such as faunal material

Source: San Francisco Planning Department, February 2022.

Notes:

- ^a *Paleosols* are soils that form on the surface while a particular geologic formation (e.g., a dune) is exposed, and then are later buried by sands, silt, or other natural deposits. Paleosols represent surfaces that may have been available for human occupation at the time the soils were formed, and may contain archeological deposits of substantial age. Along the San Francisco bayshore, as rising sea levels at the end of the last Ice Age led to the formation and expansion of San Francisco Bay, surface soils—some of which included archeological deposits of substantial age—were buried by bay bottom silts and submerged. Such soils are valuable sources of data regarding past environments, as well as past human occupation.

Table 4.2-5: Historic-Period Archeological Research Topics

Research Topics	Summary	Site Types
<p>Spanish, Mexican, Californios (1776-1848)</p>	<p>The Spanish created a religious mission complex for enslaving and converting native peoples to Catholicism, introduced European modes of economic production, and established a military garrison to defend the territory. In the 1830s, the Mexican government began secularizing the California missions and granted vast tracts of land to civilians who developed rancho compounds. When California joined the U.S., San Francisco was a multicultural settlement. The town of Yerba Buena may provide information on adaptations and cultural reshaping of a new population on the frontier.</p>	<p>Various site types (e.g., domestic, commercial, agricultural, military, institutional) that date to between 1776 and 1848. Resource types includes refuse deposits, privies, hearths, and structural remains. Expected in Bernal Heights, Buena Vista, Central, Marina, Mission, Northeast, South Central, SoMa planning districts.</p>
<p>Gold Rush Era (1848-1855)</p>	<p>The population boom by 1849 brought dramatic growth to San Francisco. Immigrants came from all over the world, bringing different traditions, skillsets, and goods. The city was expanded several times, large areas of downtown were rebuilt due to multiple fires, and the geography was drastically altered to create more habitable land.</p>	<p>Various site types (e.g., domestic, commercial, agricultural, military, institutional) that date to between 1848 and 1855. Resource types includes refuse deposits, privies, temporary structures, and structural remains. Expected in northeast quadrant of the city.</p>
<p>Initial Settlement of San Francisco</p>	<p>Historic sites that date to the Spanish, Mexican, Californios period reflect the approach to a frontier, adaptation to a setting that was at least somewhat novel, and recruitment of a new, involuntary labor force, and may yield data related to population interactions and adaptation. The settlement of Yerba Buena, which boomed over a very short time, also may provide information on adaptations and cultural reshaping of a new population on the frontier. Much later frontier-like settlement, such as Carville in the Sunset/Parkside neighborhood, may address similar issues related to frontier adaptation.</p>	<p>Resource types may include structural remains such as walls and by domestic, intuitional, and industrial deposits. The early late 18th and early 19th century Hispanic settlement of San Francisco (mostly Mission and Potrero Hill neighborhoods), mid-19th century settlement and growth of Yerba Buena (Financial District/South Beach neighborhood), and Carville (in northwest corner of Sunset/Parkside neighborhood).</p>

Research Topics	Summary	Site Types
Agriculture and Ranching	Sites may provide information about how water was obtained/diverted/controls, animal control and processing, environmental change through introduction of agriculture.	Archeological evidence of fencing, water diversions, row crop cultivation, ranch and farm support structures and features, such as wells, butchering refuse deposits, and residential features associated with in Hispanic ranching sites (Mission and Potrero Hill neighborhoods), Chinese vegetable gardens (North Beach and Marina neighborhoods, southeastern areas of city), and farm and greenhouse sites in areas of San Francisco that remained rural into late 19 th and early to mid-20 th century (Lake Merced vicinity, Visitacion Valley neighborhood).
Consumer Behavior and Strategies	Historical sites provide information on the types of goods that were available for purchase. San Francisco residents also may have grown food in their backyards or fished or hunted in surrounding areas. Household refuse, including remains related to domestic activities such as food preparation and consumption as well as activities related to personal hygiene and appearance, reflects the values that underlie peoples' consumer choices.	Hollow fill depositional features such as privy pits, wells, trash pits and or trash scatter that can be associated with a particular household or group of households and that yield dateable material. Expected anywhere in city.
Mercantile – Trade Markets and Networks	Connecting emerging markets in San Francisco to central places provides information about how communities of varying scales influenced one another and interacted with national and international markets. This may be documented on the household and neighborhood level.	Hollow fill depositional features such as privy pits, wells, trash pits and or trash scatter that can be associated with a particular household or business and that yield dateable material, particular commercial goods; anywhere in city.
Ethnicity, Class, and Urban Subcultures	Comparisons of cultural deposits associated with residents of distinct ethnicities, religions, and socio-economic status can reveal similarities and differences in the behaviors of different groups of people. When interacting, groups express their identity; they do so as both active and responsive participants.	Best suited to study of multiple features of the types listed with consumer strategies and residential research topics. Expected anywhere in city.

Research Topics	Summary	Site Types
Institutions	Archeological materials can provide insights into the way institutions functioned as well as the ideologies of those who controlled institutions and those who were the patrons. Material remains may provide evidence of changing uses of an institution.	This site type includes organizations such as schools, hospitals, and churches and might be represented in the archeological record as refuse deposits and structural remains. This resource type will have similar features as those discussed above but might be at a larger scale. Expected anywhere in city
Industrialization and Technology	Analysis of industrial byproducts and waste can provide information on industrial processes, techniques, and innovations that would not otherwise be available. Industrial sites can also provide information on labor conditions and practices. Industrial waste was commonly used to infill land during the historic period.	Includes refuse and structural remains of industries, such as tanneries, butchers, shipbuilding, glassworks, and ironworks. Industrial waste deposits, machinery foundations and machines/ machine parts; occasionally, domestic deposits or debris associated with laborers at an industrial site. This resource type will have similar features as those discussed above but might be at a larger scale than domestic, commercial, or institutions. Expected primarily along eastern and southeastern side of city, Islais and possibly Mission Creek, around Mission Bay and Yerba Buena Cove.
Gender and Family	Gender identities, roles, and ideologies vary across cultural groups over time. Specialized activity areas such as outdoor cooking areas, kitchen gardens, or gaming areas with artifacts can be associated with gender and/or age.	Hollow fill features or sheet deposits, sometimes in association with floor/decking or street surfaces that include artifacts that can be attributed to persons of a given age range (e.g., children) or gender. Expected anywhere in city
Waterfront: Buried Ships (wrecks, storeships, etc.) and Wharves	Archeological deposits associated with the maritime industry and waterfront development have been found along the historical shoreline, primarily with historical Yerba Buena cove shoreline, representing the maritime cultural landscape of San Francisco's waterfront. Some vessels were docked and reused as hotels, shops, or storehouses.	Submerged/buried features and deposits, including ships, wharves, maritime repair facilities, most often in the Young Bay Mud and lower part of the overlying fill; occasionally, refuse deposits associated with these features. Expected primarily along eastern and southeastern waterfront, Islais Creek and possibly Mission Creek, around Mission Bay and Yerba Buena cove.

Research Topics	Summary	Site Types
Urban Geography	Both cutting and filling of the natural topography took place in San Francisco, and raising streets improved transportation in impassable areas. Archeological investigation allows researchers to determine if individual households found solutions for drainage, sewage, and refuse disposal issues outside of the framework provided by city planners and the evolution of the city's' water, sewer and street infrastructure.	Features representing privy and septic systems, a range of types of water pipes, street and road surfaces. Cut fill studies may also be important in reconstructing urban geography. Expected anywhere in city.
Waste Disposal, Dumps, and Land Reclamation	Dumps provide insight into the process of urban development and shed light on not only consumption but the availability of specific consumer goods. Refuse provides evidence of human behavior and is useful for research purposes when associations between the refuse and the people who deposited it can be made on an individual, household, planning district, or citywide level.	Waste deposits that include dateable materials and that can be associated with a particular group, activity, and constrained period of time. Land reclamation features, including sea walls, dikes, and sand control features. Expected primarily along eastern and southeastern waterfront, Islais and possibly Mission Creek, around Mission Bay and Yerba Buena cove.
Historical Burial Practice	Burial methods and goods are often tied to religion and ethnicity and may also be tied to socioeconomic status. The ability to ascribe burials to known individuals enables archeologists to determine what factors influenced how people were buried.	Mortuary deposits, including coffins, coffin hardware, exhumation pits, and human remains; mortuary furniture and cemetery infrastructure, including grave makers, curbing, evidence of roads, fences, and landscaping. Expected mostly (but not exclusively) within known historic period burial places.
Nineteenth-Century Health and Disease	Nineteenth century residents of San Francisco suffered from a variety of ailments. Some of these are visible in the physical remains of individuals, while health-related artifacts show what remedies people relied on.	Historical human remains; hollow fill deposits that include dateable medicinal artifacts. Deposits could be associated with any development in the city. Human remains expected mostly (but not exclusively) within known historic period burial places.
Services	Service industry archeological resources include the remains of brothels, saloons, restaurants, theatres, laundries, and the shops of tailors/seamstresses. Commercial refuse deposits have been used to reconstruct foodways, trade patterns, gambling, and drug-taking.	Hollow fill deposits or sheet refuse that can be associated with a particular business or service. Expected throughout the city, includes recreational outposts in the western half of the city such as those around various 19 th century racecourses at Lands End, Stern Grove, and elsewhere.

Research Topics	Summary	Site Types
Residential	Residential archeology examines domestic units, including single families, multi-families, multi-household spaces, hotels and boardinghouses, and live/work arrangements. It focuses on themes such as gender, class, race, ethnicity, consumerism and consumer choice, and health, as well as the intersections between them, based on the context studied.	This resource type may include refuse deposits, as well as structural remains, including buildings, basements, wells, cisterns, privies, and garbage pits. Hollow fill deposits that include a range of domestic materials. Expected in areas developed residentially in the 19 th century, primarily in the eastern, northeastern, and north central parts of the city.

Source: San Francisco Planning Department, October 2021.

As detailed under “Historic-Period Context,” above, the Spanish, in the late 18th century, created a religious mission complex in San Francisco to convert native peoples to Catholicism, introduced and coerced Native Americans into labor to support European modes of economic production, and established a military garrison to defend the territory. In the 1830s, the Mexican government began secularizing the California missions and granted vast tracts of land to civilians who developed rancho compounds. When California joined the U.S., San Francisco was a multicultural settlement.

The population boom associated with the 1848 gold rush brought dramatic growth to San Francisco. Immigrants came from all over the world, bringing different traditions, skillsets, and goods. The city was expanded several times, large areas of downtown were rebuilt due to multiple fires, and the geography was drastically altered to create more habitable land.

Rapid urban development continued in San Francisco through the 19th and into the 20th century. During this time, the eastern side of the city continued to be the focus of commerce and industry, while the western side of the city changed from a rural area of sand dunes with scattered recreational facilities and farms to dense semi-urban suburbs. This development in the previously relative rural western and southern parts of the city accelerated with redevelopment of the city after the devastating earthquake and fire of 1906, as discussed under “San Francisco Urban and Residential Development, 1848-present,” above.

The research topics below are pertinent to the information that may be provided by archeological resources associated with the historic period (see **Table 4.2-4**, p. 4.2-63). In San Francisco, this extends from the time of the Spanish arrival in San Francisco, in 1769, to the present. Under California register criteria, as outlined above under Regulatory Setting, in general resources that date to as late as the 1970s may be considered historic period resources. However, the widespread development of urban infrastructure and services, well underway by 1905 or earlier, completely or almost completely eliminated the use of backyard privies and refuse pits and local wells. In San Francisco, these are the primary property types that have yielded significant information on the historic period. Further, archival data capture much of the information potential for historic period resources after this time. As a result, few areas in the eastern part of San Francisco hold much potential for significant historic period archeological resources after the 1906 earthquake, and few in the southern and western parts of the city after about 1930.

Historic-period archeological resources include individual objects; features consisting of spatially and historically associated objects; and sites – historically and spatially meaningful associations of objects, features, structural remains, and elements of landscape. Eighteen research topics have been identified and are listed with historical site types in **Table 4.2-4**, which provides the link between historic-period site types and their ability to provide significant information about San Francisco and California history. The first two categories are defined by a particular time period. Resources from either the Spanish, Mexican, Californio period or the Gold Rush era could have relevance to other the research topics; however, archeological resources from these periods are rare, supporting documentary evidence is sparse, and therefore their potential significance to San Francisco history is important and merits individual treatment. It should be noted, that beyond research value, archeological resources provide tangible evidence of the past and put a human face on individuals and groups that may have otherwise been lost to history. Artifacts recovered through archeological investigation should also be assessed for their value in public outreach and education of significant historical events or trends.

Archeological Sensitivity by Planning District

Archeological sensitivity is the assessed potential for past land uses in the city to have resulted in archeological features or deposits that may be considered archeological resources, and the potential for such resources to have survived subsequent development. This section uses existing data to summarize the landscape, history, ethnography, and known archeology of the city and assesses the relative archeological sensitivity of different parts of the city, based on these data. An archeological sensitivity assessment (Appendix F.2 of this EIR) was prepared to assess the relative archeological sensitivity in San Francisco in support of the proposed action. See Appendix F.2, Figures 23 to 26, of this EIR for archeological sensitivity maps.

To understand the archeological character of the city and the potential to encounter both known and undiscovered archeological sites, the archeological sensitivity assessment considered existing literature, archival city maps, historical maps, geotechnical reports, archeological reports, and existing archeological site records. Archeological site records on file at the department, which are updated regularly through the files of the Northwest Information Center, California Historical Resources Information System, were reviewed. Locations of known Native American and historic period sites, historical maps and records, geotechnical and geoarcheological data regarding soil stratigraphy, and archeological modeling to predict the locations at which Native American archeological sites are likely to occur,⁹⁸ to assess the potential for archeological resources to be present throughout the city. For an understanding of modern development in relationship to the past disturbance of archeological resources, this analysis considers aerial imagery, the San Francisco Property Information Map, and records of ground disturbance and foundation types from recent projects. The relative archeological sensitivity of various parts of the city is discussed in detail in the archeological sensitivity assessment prepared for the proposed action, and conclusions are summarized in **Table 4.2-6**.

⁹⁸ Meyer, Jack and Paul Brandy, *Geoarcheological Assessment and Site Sensitivity Model for the City and County of San Francisco, California*, prepared by Far Western for the Environmental Planning Division of the San Francisco Planning Department, 2019.

Table 4.2-6: Archeological Sensitivity of Planning Districts

Planning District	Native American Archeological Sensitivity	Known Archeological Sites	Historic-Period Archeological Sensitivity	Quantity of Archeological Investigations Undertaken
Bernal Heights	Moderate at southern and northern borders of district for surface and buried sites; moderate to high potential for submerged sites in southeast corner; low sensitivity elsewhere	0	High sensitivity along northern border; low sensitivity elsewhere	Very low
Buena Vista	Moderate to high sensitivity for surface and buried sites in eastern and western parts of district; very low sensitivity elsewhere	3	High sensitivity in eastern corner; low sensitivity elsewhere	Low
Central	Moderate to high sensitivity for surface and buried sites northeast corner and southern tip; low sensitivity elsewhere	2	High to moderate sensitivity along the northeast edge of district; low sensitivity elsewhere	Moderate
Downtown	High sensitivity for surface and buried sites in southern two-thirds; submerged sensitivity in bay fill areas closest to the historical bay shoreline	21	High sensitivity throughout	High
Ingleside	High sensitivity for surface and buried sites around Lake Merced; low sensitivity elsewhere	7	Generally low sensitivity, but some potential for early transportation infrastructure and scattered recreational sites	Low
Inner Sunset	Moderate sensitivity for surface and buried sites at north boundary and in the center around historical water sources; otherwise low sensitivity	0	Generally low sensitivity with some potential for early transportation infrastructure and late 19th-century agricultural, recreational and institutional sites	Low

Planning District	Native American Archeological Sensitivity	Known Archeological Sites	Historic-Period Archeological Sensitivity	Quantity of Archeological Investigations Undertaken
Marina	High to very high sensitivity for surface and buried sites in central and northern part of the district; high sensitivity for submerged sites in northwestern portion of district along the historical bay shoreline; low sensitivity in southern half of district	5	High sensitivity focused in the center, with other high sensitivity areas in northwest, northeast, eastern borders of district; otherwise generally low	High
Mission	High sensitivity for surface and buried sites in central and northern parts of the district and along historic creek courses; moderate to high sensitivity for submerged sites in the center of district on historical marshlands; otherwise low to moderate	9	High sensitivity throughout	Moderate
Northeast	High sensitivity for surface, buried, and submerged sites in north and east of district along historical bay shoreline; low sensitivity elsewhere	19	High sensitivity throughout	Moderate
Outer Sunset	Low sensitivity for surface and buried sites throughout, with an increase to moderate in the vicinity of freshwater sources at north and south ends (Pine Lake and near Golden Gate Park ponds); moderate to high sensitivity for submerged sites along ocean shoreline	1	High sensitivity in northwest corner and northeast quadrant; generally low sensitivity elsewhere	Low
Richmond	Low sensitivity for surface and buried sites throughout, with an increase to moderate and high in the vicinity of freshwater ponds in the northeast and southwest portions of the district; moderate to high along ocean shoreline	6	High sensitivity in eastern and northwestern ends of the district; otherwise generally low	Moderate
South Bayshore	High sensitivity for surface and buried sites in northwest and Hunters Point; high sensitivity near Yosemite Slough, along Islais Creek, and historical bay shoreline ; moderate to low elsewhere	18	High sensitivity in central-north portion of the district along historical bay shoreline, Islais Creek, Yosemite Slough; otherwise generally low	High

Planning District	Native American Archeological Sensitivity	Known Archeological Sites	Historic-Period Archeological Sensitivity	Quantity of Archeological Investigations Undertaken
South Central	Moderate to high sensitivity for surface and buried sites along historical Islais Creek alignment; otherwise generally low	4	Generally low sensitivity; isolated areas of high sensitivity in southeast and northwest portions of the district	Low
South of Market	High sensitivity for surface and buried sites along historical shoreline, high sensitivity for submerged sites along Mission Creek and east of historical bay shoreline	38	Generally high sensitivity; low sensitivity along southwest corner	Very high
Western Addition	High sensitivity for surface and buried sites in southwest and north-central portion of the district	5	High sensitivity at west end around historical cemeteries, in center and southeast of district, with some isolated high sensitivities in the northeast of district	Low

Source: ICF, *San Francisco Housing Element Update 2022 Archeological Sensitivity Assessment*, Environmental Case Number 2019-016230ENV, 2022.

Table 4.2-6 indicates the number of archeological sites presently known, and the assessed or modeled archeological sensitivity by planning district. The sensitivity assessments provided here reflect what is presently known about the distribution of archeological resources in San Francisco based on prior archeological work, archival research, and archeological modeling. However, as indicated in the last column in the table, there are many areas of the city that are archeologically virtually unknown due to the limited archeological investigations that have occurred in these planning districts. The results of sensitivity modeling are provided on graphics in the archeological sensitivity assessment for this project (see Appendix F.2 of this EIR). While this modeling provides estimations about where archeological sites are likely to be found, modeling is simply a best estimate based on existing environmental and archeological information about patterns of site distribution, and does not rule out the presence of archeological sites at unexpected locations. The sensitivity assessments below should be considered with these caveats in mind.

Summary of Native American Archeological Sensitivity

Archeological data and related modeling suggest that areas located within approximately 650 to 800 feet of a perennial stream channel or lake or of the bayshore have the highest sensitivity for the presence of Native American archeological resources. This is highly consistent with the historically documented distribution of

Native American archeological sites in San Francisco,⁹⁹ and as documented in the confidential San Francisco County archeological records on file at the California Historical Resources Inventory System, Northwest Information Center at Sonoma State University.

In general, the sensitivity for Native American archeological resources in San Francisco, based on existing information, is highest in a band that extends along the bay shore from Fort Point (east of the Golden Gate Bridge) eastward and southward along the northern and eastern shore of the city; along the predevelopment shores of Mission Bay and its marshlands; along the historical alignments of the city's creeks and estuaries (e.g., Mission and Islais creeks); and within about 650 feet of other natural water sources. These include Lake Merced, but also a substantial number of now-vanished ponds and springs that are historically mapped at a range of locations around the city (for example, in the Western Addition, Inner Richmond, Marina and Buena Vista planning districts, and in the Presidio and Golden Gate Park).

Archeological investigations in San Francisco have largely been concentrated in the South of Market and Downtown planning districts, with the Mission, South Bayshore, and Marina planning districts to a lesser degree, and at least portions of each of these areas are known to be highly sensitive. Other modeled areas of high sensitivity for Native American resources include the strip along the Pacific Coast, the areas around Lake Merced in the western portions of the Ingleside planning district and portions of the Western Addition, Buena Vista and South Central planning districts. With some exceptions, much of the interior/inland areas of the Inner and Outer Sunset, Marina, Northeast, Central, South Central, and Buena Vista planning districts are modeled as having low archeological sensitivity.

Summary of Historic-Period Sensitivity

The eastern portions of the city generally have the highest potential in the city for the presence of significant historic-period archeological resources. Portions of the Mission and South of Market planning districts are sensitive for near surface evidence of the Spanish Mission complex, the earliest historic development of the city, and for Hispanic settlement and ranching sites that date to the early decades of the 19th century. The shores and former waters of Yerba Buena Cove, in the Downtown and South of Market planning districts, have high potential for the occurrence of pre-gold rush settlement and for gold rush ships, wharves, and associated domestic and commercial sites, which are among the earliest 19th century historical sites expected in San Francisco. The Downtown, Northeast, and South of Market planning districts also are sensitive for commercial and domestic resources associated with the 19th century growth of San Francisco, which spread out, in the later decades of the 19th and the early 20th century, across other areas in the northern and eastern parts of the city. The South Bayshore and portions of the South of Market planning districts also are sensitive for 19th century resources associated with industries and associated settlement. The eastern part of the Richmond planning district and parts of the Western Addition and Downtown planning districts are archeologically sensitive for the presence of mortuary materials associated with relocated 19th century cemeteries. Elsewhere in the city, 19th century activity that may have resulted in significant archeological sites was mostly rural or recreational in nature and sparsely distributed. The southeastern quadrant of the city, including the Inner and Outer Sunset and Ingleside planning

⁹⁹ Nelson, N. 1908. Shellmounds of the San Francisco Bay. University of California Publications in Archeology and Ethnography. Berkeley.

districts, with a few exceptions, saw little significant development prior to the 1920s and thus have generally low historic-period archeological sensitivity.

2020 Conditions Compared to 2050 Environmental Baseline Conditions

Under the 2050 environmental baseline, as shown in **Figure 2-6**, p. 2-18, in Chapter 2, Project Description, housing development at some level is projected for most areas of the city. However, the highest concentration of new housing units is projected in the South of Market, Downtown, Western Addition, and Mission planning districts. The 2050 environmental baseline projection includes other areas of concentrated development in the southwestern part of the South Bayshore, and the Ingleside and South Central planning districts

As discussed in “Environmental Setting,” above, and in **Table 4.2-6**, p. 4.2-71, the planning districts in the eastern side of the city, where 2050 environmental baseline development is projected to include large numbers of new housing units—Downtown, South of Market, Mission and South Bayshore planning districts—were assessed as highly sensitive for the presence of historic-period and/or Native American archeological resources. The portion of the Western Addition planning district that is projected to see development of the highest numbers of housing units under the 2050 environmental baseline also has elevated archeological sensitivity. In addition, while the Ingleside planning district, in the southwestern corner of the city, has generally lower archeological sensitivity, the portion of the planning district west of 19th Avenue, where a substantial number of 2050 housing units under the 2050 environmental baseline are projected, is moderately to highly sensitive for the occurrence of Native American archeological resources. Except for a few clusters of projected denser development, relatively low numbers of new housing units are projected under the 2050 environmental baseline for the Inner or Outer Sunset, Richmond, Marina, Northeast, Buena Vista, Central, or Bernal Heights planning districts, in the northern, northwestern and central interior parts of the city, which have variable archeological sensitivity.

While, based to the sometimes-idiosyncratic nature of historic-period and Native American land uses, impacts to some significant archeological resources would be expected even in areas assessed as having generally low archeological sensitivity or where relatively low numbers of new housing units are projected. Archeological resources with the potential to be disturbed under the 2050 environmental baseline would be expected to be concentrated in the South of Market, Downtown, Western Addition and Mission planning districts, in the central-east part of the city, and in the areas in the Ingleside planning district between Lake Merced and 19th Avenue and in the eastern/southeastern part of the South Bayshore planning district.

Environmental Impacts

This section describes the impact analysis related to built-environment historic resources, archeological resources, and human remains associated with implementation of the proposed action. It describes the methods used to determine the impacts of the action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts accompany the discussion of each identified significant impact.

SIGNIFICANCE CRITERIA

The proposed action would have a significant effect if it would:

- Cause a substantial adverse change in the significance of a historical resource, pursuant to section 15064.5
- Cause a substantial adverse change in the significance of an archeological resource pursuant to section 15064.5
- Disturb any human remains, including those interred outside of formal cemeteries

APPROACH TO ANALYSIS

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions.¹⁰⁰ The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

Built-Environment Resources

This section evaluates the reasonably foreseeable impacts of the housing element update on built-environment resources at a programmatic level, in accordance with CEQA Guidelines section 15168. Although the proposed action is to be analyzed at a programmatic level, this analysis still considers physical changes that may occur to San Francisco’s built environment as an indirect result of the housing element update, namely through future construction in locations and at an intensity not otherwise expected under existing policies. A significant impact to built-environment historic resources would occur if future construction that is consistent with housing element update policies demolishes or alters in an adverse manner the significant physical and setting qualities that qualify built-environment historic resources for inclusion in local, state, or national historic registers. This could occur as a result of construction projects that alter the physical characteristics of a historic resource,

¹⁰⁰ Although the total current housing units in San Francisco is based on 2020 data, the current historic resources setting presented earlier uses 2021 data.

produce vibration that damages nearby historic resources, or diminish significant aspects of a resource's historic setting.

This analysis considers the projected growth patterns developed by the department, including the possible geographic distribution of future development consistent with the 2050 environmental baseline and the housing element update through 2050. These projections assign parcel-level future housing units to establish representative distribution patterns of housing growth that are consistent with the amounts envisioned under the 2050 environmental baseline and housing element update. Although the projections illustrate possible future conditions, the depictions are not intended to be precise maps of where future development would occur. Rather, they identify the types and magnitude of impacts anticipated from the increased density and redistribution of housing growth under the proposed action compared to the 2050 environmental baseline.¹⁰¹

However, many specific details of future development resulting indirectly from the proposed action, including the actual locations selected for housing projects, are not known at this time. Furthermore, not all built-environment historic resources that will be identified between now and 2050 are currently known, and it cannot be anticipated which specific historic resources may be affected. Accordingly, this programmatic analysis assesses potential impacts to significant historic resources across San Francisco by presenting the following: a list of housing element update policies that relate most closely to physical change in the city's built environment, which includes significant historic resources; a discussion of the types of future development projects that are anticipated to result from housing element update policies; and a review of quantitative data to identify the neighborhoods that are expected to experience change as an indirect result of the housing element update as compared to the 2050 environmental baseline.

Archeological Resources and Human Remains

Soil disturbance associated with the construction of future development consistent with the housing element update has the potential to disturb and destroy archeological resources. This would result in the loss of significant historical, scientific, and cultural information about California, the region, and San Francisco, which would be a significant impact. As discussed in "Environmental Setting," above, the likelihood of significant resources being present and being encountered during ground-disturbing development (that is, *archeological sensitivity*) varies geographically. The potential for archeological impacts to occur would be expected to be higher in areas of elevated archeological sensitivity and would vary with the location and density of development and the volume and depth of soil excavation at a particular project site.

The impact analysis below compares the projected geographic distribution and density of future development consistent with the proposed action to the 2050 environmental baseline. The archeological impact assessment presented in **Table 4.2-9**, p. 4.2-101, is based on the difference in anticipated impacts expected under future development consistent with the housing element update relative to those under the existing 2014 housing element.

¹⁰¹ More information about the modeling and growth assumptions the department used to project the likelihood and pattern of development under the 2050 environmental baseline and housing element update is included in the Housing Element 2022 Update Modeling and Projections Memorandum included in Appendix C of this EIR.

Although existing archeological data, historical records, environmental data, and archeological modeling provide a basis for a meaningful estimate of the general probability of significant archeological resources being present in a given planning district, the potential for significant resources to be present varies geographically within each planning district: the potential for a resource to be present at a particular location can rarely be ruled out altogether. Due to the nature of historic-period and Native American land uses, impacts to some significant archeological resources would be expected even in areas assessed as having generally low archeological sensitivity or where relatively low numbers of new housing units are projected. With some exceptions, the actual potential for impacts at a particular location is most accurately assessed through site-specific review of environmental and development history and of the extent and depth of proposed soil disturbance which would occur when a specific project is proposed, consistent with the department's standard preliminary archeological review. Nonetheless, the analysis presented below provides a reasonable assessment of the potential magnitude of archeological impacts that might occur as the result of foreseeable development consistent with the proposed action.

IMPACTS AND MITIGATION MEASURES

Impact CR-1: The proposed action would cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5. (*Significant and Unavoidable with Mitigation*)

The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. Future development consistent with the housing element update could result in impacts on built-environment historic resources. Such changes could occur to significant historic resources that are currently known, as well as to resources that may be identified as significant in the future.

The proposed goals of the housing element update that could result in future housing construction in San Francisco, and thus physical effects to the city's built environment, include:

- Goal 3: Foster racially and socially inclusive neighborhoods through equitable distribution of investment and growth.
- Goal 4: Provide sufficient housing for existing residents and future generations for a city with diverse cultures, family structures, and abilities.

Specific policies that are associated with these two goals and are anticipated to result in future housing construction include the following:

- Policy 19: Enable low and moderate-income households, particularly American Indian, Black, and other people of color, to live and prosper in well-resourced neighborhoods by increasing the number of permanently affordable housing units.

- Policy 20: Increase mid-rise and small multi-family housing types in well-resourced neighborhoods near transit, including along SFMTA Rapid Network and other transit, and throughout lower-density areas, by adopting zoning changes or density bonus programs.
- Policy 24: Support mixed-income development projects to maximize the number of permanently affordable housing constructed, in balance with delivering other community benefits that advance racial and social equity.
- Policy 25: Reduce development constraints such as lengthy City-permitting process and high construction costs to increase housing choices and improve affordability.
- Policy 26: Facilitate small and mid-rise multi-family buildings as a prominent housing type that private development can deliver to serve middle-income households without deed restriction, including through expansion or demolition of existing lower density housing, or by adding accessory dwelling units.

The housing element update also includes one goal and associated policies that are intended to promote neighborhoods with rich community culture, which in part derives from a neighborhood's cultural and architectural heritage. This goal and policies are listed below, along with relevant actions related to heritage conservation.

- Goal 5: Promote neighborhoods that are well-connected, healthy, and rich with community culture.
 - Policy 12: Invest in cultural anchors and expand access to land and spaces that hold cultural importance for American Indian, Black, Japanese, Filipino, and other communities directly harmed by discriminatory government actions in the past including redlining, Redevelopment and Urban Renewal, the Indian Relocation Act or WWII Japanese incarceration as a means of redressing histories of dispossession, social disruption, and physical displacement based on a reparations framework.
 - Action 12.d: Fund the development and implementation of community-developed strategies in Cultural Districts to retain and grow culturally associated businesses and services that attract residents back to the area.
 - Action 12e: Recognize spaces of cultural importance identified by American Indian, Black, Japanese, Filipino, and other communities directly harmed by discriminatory government actions in community planning and regulatory review for development projects, consult them in decisions affecting those spaces, and direct resources towards their preservation and management.
 - Action 12f: Fund the development of cultural spaces that serve communities harmed as described under this policy, using potential new funding sources such as the mitigation fund referenced under Policy 37, action (c) or community facilities fees.
 - Action 12g: Explore utilizing the Legacy Business Registry program to direct resources to businesses and not-for-profit organizations associated with American Indian, Black, Japanese, Filipino, and other communities directly harmed by discriminatory government actions.

- Policy 34: Support the repair and rehabilitation of housing to ensure life safety, health, and well-being of residents, especially in Environmental Justice Communities, and to support sustainable building practices.
- Policy 36: Shape urban design policy, standards, and guidelines to enable cultural and identity expression, advance architectural creativity and durability, and foster neighborhood belonging.
 - Action 36.a: Create and adopt a new objective design standard to require the use of natural and durable materials for front façade and windows, for example stucco, stone, concrete, wood, and metal, subject to periodic, amended revision and eliminate existing design guidelines, except in Special Area Design Guidelines or adopted or listed Historic Districts, that require detailed front façade compatibility with surrounding neighborhood architectural patterns, for example window proportions, roof shape, or type of entry.
- Policy 37: Support cultural uses, activities, and architecture that sustain San Francisco's dynamic and unique cultural heritages.
 - Action 37.a: Utilize the Cultural Districts program to support building permanently affordable housing, along with other housing development and neighborhood investments that include cultural activities, uses, traditions, and spaces, in coordination with Policy 12.
 - Action 37.b: Increase staff allocation within the Mayor's Office of Housing and Workforce Development, Office of Economic and Workforce Development, Department of Public Works, Arts Commission, and Planning to create a more robust, sustained, and effective Cultural Districts program, provide more direct support for the development and implementation of their respective Cultural History Housing and Economic Sustainability Strategies.
 - Action 37.c: Study creation of a cultural resource mitigation fund that could be paid into by projects that impact cultural resources to support cultural resource protection and preservation throughout the city, prioritizing funding the development of cultural spaces as described in Policy 12, action (f).
 - Action 37.d: Designate historically and culturally significant buildings, landscapes, and districts for preservation using the Citywide Cultural Resource Survey, planning code articles 10 and 11, and state and national historic resource registries to ensure appropriate treatment of historic properties that are important to the community and unlock historic preservation incentives for more potential housing development sites.
 - Action 37.e: Promote the use of the Retained Elements Special Topic Design Guidelines to development applicants to address sites where conserving parts of buildings sustains cultural identity and proposed housing serves the community.
 - Action 37.f: Establish priority building permit and entitlement Planning Department review processes for multi-family residential development projects that rehabilitate or adaptively reuse existing buildings to support sustainable building practices, per Policy 34, while preserving cultural resources.

- Action 37.g: Develop objective design standards for the treatment of historic buildings and districts to provide consistent and efficient regulatory review that facilitates housing development approvals and protects the City's cultural and architectural heritages.
- Action 37.h: Promote historic preservation and cultural heritage incentives, such as tax credit programs and the State Historical Building Code, for use in residential rehabilitation projects through general outreach, interagency collaboration with the Mayor's Office of Housing and Workforce Development and Office of Economic and Workforce Development, building trades collaboration, educational materials, community capacity building efforts, and through the regulatory review process.
- Action 37.j: Complete the Citywide Cultural Resources Survey, including the citywide historic context statement, with ongoing community engagement to identify important individual historic or cultural resources and districts.
- Action 37.k: Complete the Heritage Conservation Element of the General Plan in order to bring clarity and accountability to the City's role in sustaining both the tangible and intangible aspects of San Francisco's cultural heritage.

Considered in total, the goals, policies, and actions of the proposed action would shift an increased share of the city's future housing growth to transit corridors and low-density residential districts within well-resourced areas, that are primarily located on the west and north sides of the city. Well-resourced areas primarily lie within the western half of San Francisco and are located in the following neighborhoods: Castro/Upper Market, Glen Park, Golden Gate Park, Haight/Ashbury, Hayes Valley, Inner Richmond, Inner Sunset, Japantown, Lakeshore, Lincoln Park, Lone Mountain/USF, Marina, Nob Hill, Noe Valley, North Beach, Outer Richmond, Pacific Heights, Potrero Hill, Presidio, Presidio Heights, Russian Hill, Seacliff, Sunset/Parkside, Twin Peaks, Western Addition, and West of Twin Peaks. **Figure 2-1**, p. 2-4, in Chapter 2, Project Description, depicts the locations of well-resourced areas.

Figure 2-11, p. 2-35, in Chapter 2 shows the projected difference in housing unit growth and distribution between the 2050 environmental baseline and the proposed action. The housing element update policies are not prescriptive and provide only general parameters for the desired form and density of future development. However, the policies generally promote new housing in the form of small or midrise multi-family residential buildings, many of which would be expected to replace existing buildings. It is anticipated that some new buildings would have ground floor neighborhood services. Additional housing units would be built in the form of accessory dwelling units, which are independent residential units that are incorporated into, attached to, or detached from a parcel's primary residential building. These forms of development generally are expected to create the future housing units that the department has projected for the proposed action.

Proposed Action Impacts on Known Built-Environment Historic Resources

The housing element update would encourage future housing in balance with the recognition and preservation of neighborhood character and heritage, as reflected in many of the policies listed above. The department's projection of future housing units, which represents the likelihood and pattern of development under the housing element update, takes into account the presence of individual built-environment historic resources and

historic districts identified as of 2021 (including resources designated or found eligible for listing in local, state, and federal historic resource registers). Specifically, the department's projection assumes that Category A resource status would act as a development constraint for future development. The Housing Element 2022 Update Modeling and Projections Memorandum included in Appendix C of this EIR presents additional information about the modeling and growth assumptions used in the department's housing growth projection.

Goal 5 and its associated policies and actions would promote the preservation of significant built-environment historic resources, and the department's housing growth projections assume that many known individual historic resources and districts would not be selected as future development sites. However, it remains likely that in some instances future development would occur in areas containing significant historic resources. As a consequence, future development consistent with the proposed action could result in significant impacts to built-environment resources that have previously been identified.

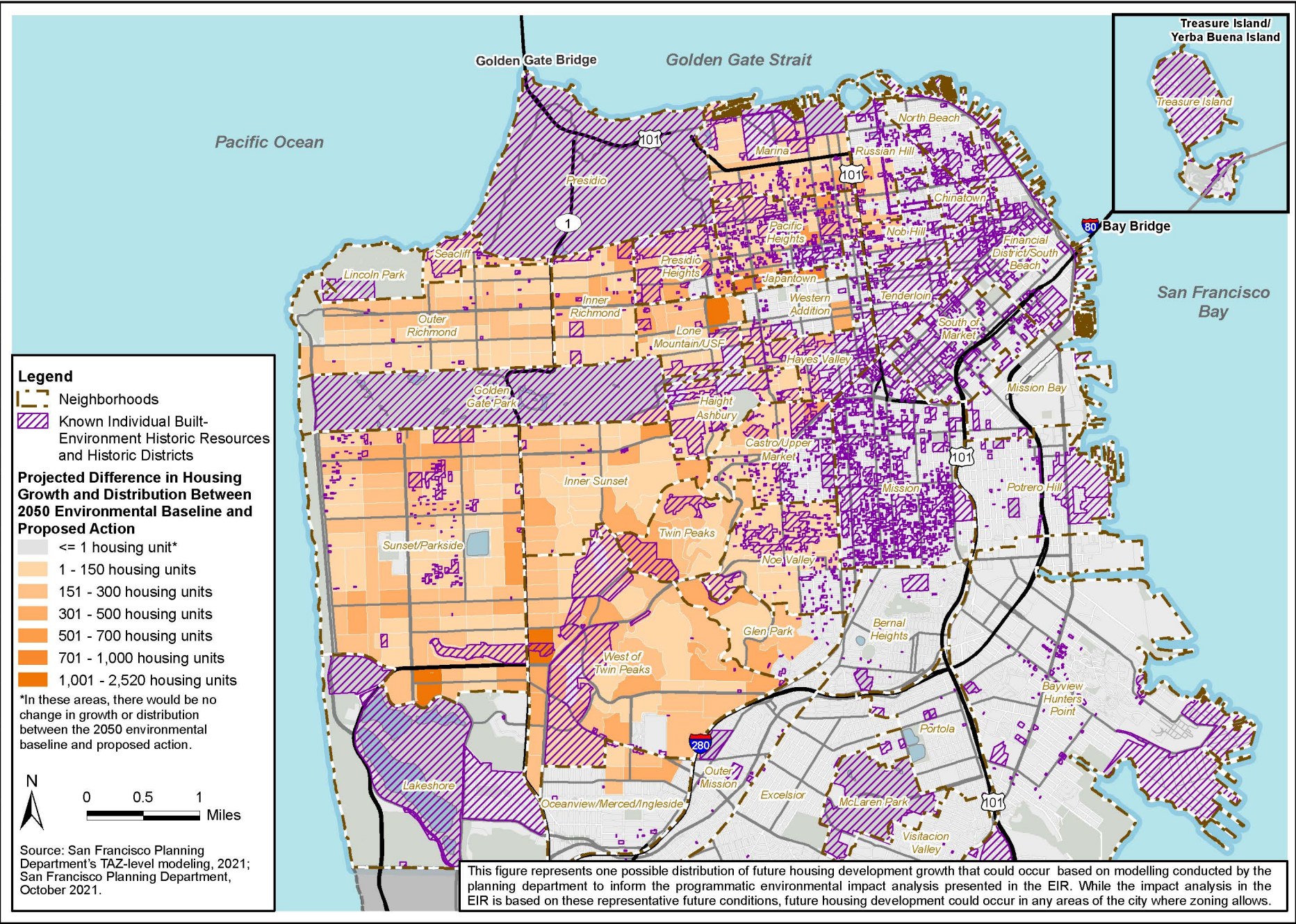
Regarding known individual resources, future development could include projects that adapt existing buildings to produce additional housing units, or that demolish buildings to redevelop their sites for new housing. If an affected building qualifies as a historic resource, demolition or substantial alteration of that building's defining physical characteristics would materially impair the resource's significance. Consistent with the department's housing growth projections, such projects could still occur on some sites containing known built-environment historic resources as discussed above. Additionally, the department's housing growth projection does not exclude the possibility of new housing construction occurring within the vicinity of known individual resources. In such scenarios, it is possible that new construction could materially impair the significance of a resource by removing or altering important features of that resource's historic setting or through construction activities that damage historically or architecturally significant features of adjacent historic resources.

The department's housing growth projection factored in the locations of known historic districts in San Francisco and assumed that future development would primarily occur outside those districts. However, future development consistent with the housing element update still has the potential to materially impair known historic districts. Material impairment would be assessed relative to the significant concentration, linkage, or continuity of the contributing properties that comprise a district. These characteristics could include, for instance, the consistent massing, roof forms, architectural styles, or lot placement that are shared among houses within a residential historic district. Demolition of district contributors, construction of new residential buildings or accessory dwelling units that are incompatible with surrounding district character, or additions that remove historic features from a contributing residence are project types consistent with the proposed action that could diminish the significant qualities characterizing a district. Depending upon a historic district's size and number of contributing properties, the demolition or incompatible alteration of one single contributor may not materially impair the district's significance. A significant impact to the district would be more likely to occur, however, after multiple contributors are removed or altered, or if large-scale housing construction were built in a location that severely disrupts the public's understanding of the district as a unified entity linked by historic physical development patterns or cultural/social contexts.

Figure 4.2-10 shows the locations of previously identified individual historic resources and historic districts (as of 2021) and the projected difference in housing unit growth and distribution between the 2050 environmental baseline and the proposed action.

Proposed Action Impacts to Unidentified Historic Resources

There is also a high likelihood that additional individual resources and historic districts will be identified in well-resourced neighborhoods through 2050, which would increase the number of parcels with historic resources that may be selected for development consistent with the proposed action. Significant individual historic resources and historic districts may be identified through the completion of the SF Survey or as a result of a project-specific evaluation conducted as part of the department's environmental review process. As described above under "2021 Built-Environment Resource Conditions," following the department's environmental review process once a development project subject to CEQA and consistent with the housing element update is proposed, additional investigation is required to determine the project-level impact of a specific development project to built-environment historic resources. Depending upon the specific site and whether potentially affected resources have been evaluated in the past, the department may require the project sponsor to engage a qualified historic preservation professional to complete a California register evaluation of any unevaluated historic-aged built-environment resources where projects would occur. Future resource evaluations will likely be informed by a number of existing and planned historic context statements, which are presented in **Table 4.2-1**. Additionally, information on the existing and planned historic context statements most relevant to evaluations in well-resourced neighborhoods are provided in Appendix F.1, Table F-3 and Table F-5, of this EIR. These historic context statements—in tandem with known cultural districts, cultural enclaves, and legacy businesses in well-resourced areas—identify a number of significant historical, social, cultural, and architectural themes that will inform resource evaluations conducted through 2050. Based on the above, it is reasonable to anticipate that future projects could be proposed in well-resourced areas on parcels that are unevaluated as of 2021 but are identified as historic resources in the future.



This analysis cannot anticipate the exact manner in which future construction may be designed, or whether such projects will propose altering or demolishing historic resources. Individual resources or district contributors could be demolished to accommodate new housing construction, which would be especially likely for existing low-rise and smaller buildings. In other instances, existing buildings could be substantially altered through rehabilitation and/or additions. Other future projects may also propose infill construction within historic districts or adjacent to individual historic resources, which could severely degrade a district’s significant qualities of continuity or an individual resource’s historic setting. It is also possible that some future development would aim to produce additional housing units while sensitively preserving or restoring the character-defining features of built-environment historic resources. Such projects would not cause a substantial adverse change in the significance of historic resources. However, goal 5 policies do not strictly mandate that all future construction must preserve historic resources in a manner that would avoid significant impacts. It is therefore reasonable to assume that some future projects would demolish or alter historic resources to construct denser forms of housing, which is consistent with the housing unit production goals of the proposed action.

To summarize the forms of future construction, **Table 4.2-7**, presents housing project types that would be consistent with housing element update policies. For each housing project type, the table provides an example scenario, as well as the anticipated level of impact prior to mitigation. The housing project types in the table represent several that are anticipated to result from the proposed action, but the list is not meant to be exhaustive and does not present every future project type that could occur.

Table 4.2-7: Summary of Housing Project Types Anticipated for Future Development Consistent with Housing Element Update

Housing Project Type	Example Scenario	Anticipated Project-Level Impact ^a
Rehabilitation of individual historic resource or district contributor meeting the secretary’s standards	Addition to a historically significant property that is compatible with, yet differentiated from, the original building in scale, architectural style, and detailing	Less than Significant
New infill construction within a historic district compatible with surrounding historic district	New infill building designed to be compatible with the massing, form, and stylistic elements that characterize a surrounding residential historic district	Less than Significant
Demolition of an individual historic resource and new construction	Removal of an eligible residential or commercial property to construct a multi-family building	Significant
Alteration of an individual resource inconsistent with the secretary’s standards	Large addition to an existing residential building that overwhelms the original massing of a resource and removes numerous character-defining exterior features	Less than Significant or Significant
New infill construction incompatible with surrounding historic district	Large-scale infill construction that eliminates linkage and continuity of a residential historic district	Less than Significant or Significant

Housing Project Type	Example Scenario	Anticipated Project-Level Impact ^a
New infill construction that alters significant aspects of a resource’s setting	Multiple new residential buildings constructed on the same block that diminish the historic neighborhood context of an eligible residence	Less than Significant or Significant
New construction utilizing heavy equipment that may damage nearby historic resources	New midrise residential building requiring pile-driving adjacent to historic resources with fragile materials	Significant
Building relocation	Relocation of a historically significant building to a new site in order to construct a denser form of housing within its original parcel	Significant

Source: San Francisco Planning Department, 2022.

Notes:

^a Indicates level of impact prior to mitigation

Thus, it is reasonable to expect that future development consistent with the housing element update would have a significant impact on to-be-evaluated built-environment historic resources. That is, future development could demolish or alter in an adverse manner the physical characteristics of a built-environment historic resource that convey its historical significance and that justify its inclusion in historic registers. It is also possible that future construction would materially impair the significance of individual historic resources in addition to historic districts—which could occur through incompatible infill construction or through demolition or substantial alteration of district contributors.

Assessment of historic resource impacts is also supported by the identification of neighborhoods in which future development consistent with the housing element update is projected to occur. The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. **Table 4.2-8** presents a neighborhood-level analysis of the anticipated change in San Francisco’s built environment that may result from the proposed action. As introduced previously, the focus of this discussion is the difference in housing units between 2050 environmental baseline conditions (reflecting the policies of the existing 2014 housing element) and the proposed action, relative to the 2050 historic resource forecast. Accordingly, **Table 4.2-8** includes the 2050 historic resource forecast to establish the representative percentages of historic resources anticipated to be known in each neighborhood by 2050. The table presents the number of housing units anticipated under the 2050 environmental baseline and anticipated as a result of development consistent with the housing element update, whether a height change is projected, and the difference in the number of housing units between the 2050 environmental baseline and the housing element update. This comparison supports impact determinations for each neighborhood, which are presented in the farthest right column of the table.

Table 4.2-8: Summary of Historic Resource Impacts from Future Development Consistent with the Housing Element Update

Neighborhood ^a	Estimated Total Percentage of Parcels Containing Historic Resources by 2050 ^b	Number of Housing Units Anticipated under 2050 Environmental Baseline ^c	Number of Housing Units Anticipated under Housing Element Update ^d	Height Change Anticipated under Housing Element Update	Difference in Housing Units Between Housing Element Update and 2050 Environmental Baseline	Magnitude of Impact under Housing Element Update Relative to 2050 Environmental Baseline
Bayview Hunters Point	25%	32,300	31,700	No	-600	Reduced
Bernal Heights	17%	10,100	9,900	No	-200	Reduced
Castro/Upper Market	29%	11,900	13,700	Yes	1,800	Increased
Chinatown	64%	7,700	7,700	No	0	Same
Excelsior	14%	11,700	11,400	No	-300	Reduced
Financial District/South Beach	64%	28,000	23,900	No	-4,100	Reduced
Glen Park	16%	3,800	4,800	No	1,000	Increased
Golden Gate Park	55%	0	0	No	0	Same
Haight Ashbury	51%	8,700	9,200	Yes	500	Increased
Hayes Valley	76%	11,900	12,100	Yes	200	Increased
Inner Richmond	22%	9,800	13,000	Yes	3,200	Increased
Inner Sunset	14%	12,900	18,100	Yes	5,200	Increased
Japantown	29%	2,900	5,200	Yes	2,300	Increased
Lakeshore	63%	19,100	18,600	Yes	-500	Reduced
Lincoln Park*	18%	100	100	No	0	Same
Lone Mountain/USF	38%	6,800	10,200	Yes	3,400	Increased
Marina	41%	14,900	16,900	Yes	2,000	Increased
McLaren Park*	15%	200	200	No	0	Same

Neighborhood ^a	Estimated Total Percentage of Parcels Containing Historic Resources by 2050 ^b	Number of Housing Units Anticipated under 2050 Environmental Baseline ^c	Number of Housing Units Anticipated under Housing Element Update ^d	Height Change Anticipated under Housing Element Update	Difference in Housing Units Between Housing Element Update and 2050 Environmental Baseline	Magnitude of Impact under Housing Element Update Relative to 2050 Environmental Baseline
Mission	46%	37,700	36,400	No	-1,300	Reduced
Mission Bay	21%	10,400	10,000	No	-400	Reduced
Nob Hill	37%	16,900	17,100	Yes	200	Increased
Noe Valley	32%	11,200	11,900	Yes	700	Increased
North Beach	48%	7,100	7,100	No	0	Same
Ocean View/Merced/ Ingleside	20%	8,200	8,900	Yes	700	Increased
Outer Mission	14%	7,700	7,600	No	-100	Reduced
Outer Richmond	14%	19,900	25,900	Yes	6,000	Increased
Pacific Heights	42%	14,300	17,000	Yes	2,700	Increased
Portola	14%	5,000	4,900	No	-100	Reduced
Potrero Hill	21%	16,800	16,600	No	-200	Reduced
Presidio	54%	1,200	1,200	No	0	Same
Presidio Heights	50%	7,000	9,300	Yes	2,300	Increased
Russian Hill	21%	10,600	11,300	Yes	700	Increased
Sea Cliff	47%	1,000	1,500	No	500	Increased
SoMa	54%	32,200	29,400	No	-2,800	Reduced
Sunset/Parkside	21%	29,600	45,900	Yes	16,300	Increased
Tenderloin	87%	22,100	21,900	No	-200	Reduced
Treasure Island	100%	10,900	10,900	No	0	Same

Neighborhood ^a	Estimated Total Percentage of Parcels Containing Historic Resources by 2050 ^b	Number of Housing Units Anticipated under 2050 Environmental Baseline ^c	Number of Housing Units Anticipated under Housing Element Update ^d	Height Change Anticipated under Housing Element Update	Difference in Housing Units Between Housing Element Update and 2050 Environmental Baseline	Magnitude of Impact under Housing Element Update Relative to 2050 Environmental Baseline
Twin Peaks	15%	3,700	4,600	Yes	900	Increased
Visitacion Valley	13%	6,800	6,700	No	-100	Reduced
West of Twin Peaks	32%	16,800	27,000	Yes	10,200	Increased
Western Addition	42%	18,600	18,800	Yes	200	Increased

Source: San Francisco Planning Department, October 2021; San Francisco Planning Department's TAZ-level modeling consolidated into the 41 neighborhoods, 2021.

Notes:

- ^a The neighborhoods listed above are based on 2010 census tracts. Those marked with an "*" encompass large parks, but the neighborhood boundaries also include some adjacent housing outside of park boundaries, which accounts for housing units identified in those neighborhoods.
- ^b Percentages have been rounded.
- ^c Estimated net new housing units projected by 2050 based on existing zoning and housing policy. These numbers are approximations developed through modeling for the purpose of impact analysis. They are not intended to represent an exact number of units that will be developed, but to reflect relative magnitude of projected development by neighborhood. Numbers have been rounded and will not sum to the total.
- ^d Estimated net new housing units by 2050 based on adoption of housing element update. These projections are approximations developed to support impact analysis, and do not represent a cap or quota. It is not expected that adoption of the housing element update would lead to development of exactly this number of housing units. Numbers have been rounded and will not sum to the total.

Significant impacts to built-environment historic resources are anticipated under both the 2050 environmental baseline and the proposed action because each would result in future construction on the sites of known or yet-unevaluated or future historic-age resources. Some projects consistent with the proposed action could involve the demolition or substantial alteration of individual historic resources and historic districts. However, **Table 4.2-8** (p. 4.2-87) identifies the impact of future development consistent with the housing element compared to the 2050 environmental baseline. The finding of increased or reduced impact is based on whether future development consistent with the housing element update is projected to result in more or fewer housing units in a neighborhood—and thus a greater or lesser likelihood of materially impairing the significance of built-environment historic resources—when compared against the 2050 environmental baseline. This finding also takes into consideration neighborhoods with anticipated height changes resulting from development consistent with the proposed action. Height changes on parcels with smaller or low-rise historic resources may increase the potential that the resources would be demolished or substantially altered. For example, the Castro/Upper Market neighborhood would have an increased impact under the proposed action because it would contain a greater number of housing units in 2050 compared to the 2050 environmental baseline, and height changes are anticipated.

The majority of future development consistent with the housing element update in comparison to the 2050 environmental baseline is projected to occur in neighborhoods in the western half of San Francisco, with additional housing units also anticipated in the city's northeastern quadrant and near its geographic center. Neighborhoods where the highest number of future housing unit shift is anticipated to include Inner Sunset, Outer Richmond, Sunset/Parkside, and West of Twin Peaks, where projected percentage of historic resources in 2050 range from 14 to 32 percent of total neighborhood parcels. Some neighborhoods where comparatively fewer future housing units are anticipated have a higher 2050 historic resource forecast, exceeding 50 percent of parcels in those neighborhoods. In total, all neighborhoods where future development consistent with housing element update is projected to occur may contain historic resources on more than 14 percent of their parcels by 2050.

Future development consistent with housing element update would have the potential to result in demolition or alteration in an adverse manner of historic resources. Therefore, it is reasonable to anticipate that future development consistent with the housing element update would materially impair the significance of individual historic resources and historic districts, including previously known and yet to be identified resources. Preservation-oriented policies in the housing element update would not prevent future development from demolishing or adversely altering significant built-environment resources, specifically in those neighborhoods with a greater share of future housing, as compared to the 2050 environmental baseline.

As a result, impacts of future development consistent with the housing element update on built-environment resources would be *significant*.

The following mitigation measures would be required. These mitigations present a range of possible measures that may be deemed suitable to reduce or avoid significant impacts of future projects consistent with the housing element update. Not all measures would be required for an individual project. During project-level environmental review for those future projects, the department will assess an individual project's impact. If a

project's impact is less than significant, no mitigation is required. If a project's impact is significant, the department will determine which of the following measures are appropriate, given the specific characteristics of the project and the affected resource. The text that accompanies each mitigation measure describes situations in which the department may determine specific measures to be appropriate for a given project. Mitigation Measure M-CR-1a: Avoid or Minimize Effects on Identified Built Environment Resources would be required for future projects consistent with the housing element update that would not comply with the secretary's standards, would demolish historic resources, or would substantially alter important characteristics of a resource's historic setting.

Mitigation Measure M-CR-1a: Avoid or Minimize Effects on Identified Built Environment Resources.

The project sponsor of a future development project consistent with the housing element update that would result in material impairment to a built-environment historic resource, either an individual resource or a historic district, shall consult with the department's preservation and design staff on feasible means for avoiding or reducing significant adverse effects on built-environment resources per applicable department guidelines, such as residential design guidelines and policies in the urban design element. The project sponsor, in consultation with preservation and design staff, shall provide at minimum drawings and rendering of a proposed project that avoids material impairment of the historic resource in order for the environmental review officer (ERO) to determine if such a project is feasible. Additional studies and reports, such as an economic feasibility analysis, may be required as directed by the ERO. If the project is determined infeasible based on the above criteria, the project sponsor shall consult with the department's preservation and design staff to determine an approach to reduce the significant impact on built-environment resources. This could include, but is not limited to, retaining a portion of the existing building or retaining specific character-defining features and incorporating them into the project. The project sponsor shall demonstrate the feasibility, as defined in CEQA Guidelines section 15364 and as determined by the ERO, of retention of character-defining features or a portion of the existing building to the department's preservation and design staff by providing drawings and renderings along with other requested studies and reports.

The majority of construction projects that occur in San Francisco on parcels containing or adjacent to built-environment historic resources occur without damaging those resources. However, some future projects consistent with the housing element update may involve construction activities that have the potential to damage the physical characteristics of historic resources that allow the resources to convey significance. Construction-related ground-borne vibration caused by construction equipment may result in vibration damage to historic resources as discussed in Section 4.5, Noise and Vibration. Section 4.5 includes Mitigation Measure M-NO-3a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction, which would protect built-environment historic resources from damage caused by construction-related ground-borne vibrations. Mitigation Measure M-NO-3a requires project sponsors to conduct a pre-construction assessment of potentially affected buildings or structures, establish vibration limits not to be exceeded based on the condition of the buildings or structures, monitor vibration levels during construction, and repair any vibration-related damage to the building or structure's pre-construction condition.

Other construction-related activities may also have the potential to cause inadvertent damage to significant character-defining features beyond those resulting from ground-borne vibration. Although it is unlikely that such construction-related damage would result in material impairment of a historic resource, there is a potential for construction-related activities to cause damage to the physical characteristics of a historic resource that allow the resource to convey its significance. Example scenarios in which this could occur include taller proposed projects (high-rise buildings) or projects requiring complex construction activities on smaller or confined lots containing or adjacent to historic resources. Damage may result from the use of large or multiple excavators in confined spaces adjacent to or within historic resources. Damage may also result from the storage or staging of unstable materials or large construction equipment within or adjacent to historic resources. Additionally, for projects retaining a portion of a historic resource, there is the potential that the retained portion of the historic resource may be damaged by construction-related activities if not appropriately protected. Finally, for future construction projects that propose relocation of a historic resource, there is the potential that the historic resource may be damaged during relocation activities. In these cases, the department's preservation staff may identify the need for additional protective measures, construction best practices, relocation plans, or monitoring to ensure that the significance of a resource's physical elements is sufficiently protected and preserved during project construction. Mitigation Measures M-CR-1b and M-CR-1c require protective measures and monitoring protocols that would protect built-environment historic resources from inadvertent damage and destruction during project construction, including building relocation.

Mitigation Measure M-CR-1b: Best Practices and Construction Monitoring Program for Historic Resources.

Prior to the issuance of demolition, building, or site permits, the project sponsor of a future development project consistent with the housing element update using heavy-duty construction equipment on a project site that contains a historic resource or on a project site that is adjacent to a historic resource shall incorporate into contract specifications a requirement that the contractor(s) use all feasible means to protect and avoid damage to onsite and adjacent historic resources as identified by the department, including, but not necessarily limited to, staging of equipment and materials so as to avoid direct damage, maintaining a buffer zone when possible between heavy equipment and historic resources, or covering the roof of adjacent structures to avoid damage from falling objects. Specifications shall also stipulate that any damage incurred to historic resources as a result of construction activities shall be reported to the environmental review officer within three days. Prior to the issuance of demolition, building, or site permits, the project sponsor shall submit to the department preservation staff for review and approval, a list of measures to be included in contract specifications to avoid damage to historic resources.

If damage to a historic resource occurs during construction, the project sponsor shall hire a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate), as set forth by the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, part 61). Damage incurred to the historic resource shall be repaired per the secretary's standards in consultation with the qualified professional and department preservation staff. If directed by department preservation staff, the project sponsor shall engage a qualified preservation professional to undertake a monitoring program to ensure that best practices are being followed. If monitoring is

required, the qualified preservation professional shall prepare a monitoring plan to direct the monitoring program that shall be reviewed and approved by department preservation staff.

Mitigation Measure M-CR-1c: Relocation Plan.

If the department determines relocation of a historic resource is a feasible means of reducing impacts to the resource, the project sponsor shall retain a qualified historical architect who meets the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, part 61) and structural engineer with experience in moving historic resources to prepare a relocation plan. The relocation plan will be reviewed and approved by the department to ensure that character-defining features of the buildings will be retained. The department's review and approval of the relocation plan shall occur prior to the approval of any permits for the proposed project. The relocation plan shall include required qualifications for the building relocation company to ensure that relocation is undertaken by a company that is experienced in moving historic buildings of a similar size and/or structural system as the historic resource. The relocation plan shall ensure that the historic resource will be moved without irreparable damage to the character-defining historic fabric of the resource. The project sponsor will incorporate into construction specifications for the proposed project a requirement that the construction contractor(s) use all feasible means to avoid damage to the subject property during its relocation, including, but not limited to, relocation methods and relocation activity routes, closures, and timing.

Mitigation Measure M-CR-1d shall be required if a future project proposes to demolish or substantially alter a built-environment historic resource with distinctive physical qualities that contribute to the value of the physical environment and/or the public's understanding of San Francisco history. Photographic documentation, drawings, and digital recordation would create a permanent and publicly accessible record of the physical qualities that would be lost as a result of the proposed project. Additionally, a written historical report would be appropriate for resources with significance derived from social history or cultural heritage because it would document the significant historical and/or cultural themes of the resource in a publicly accessible format. Although documentation would typically be required if a project impacts an individual built-environment resource, Mitigation Measure M-CR-1d shall also be required to document the characteristics of a historic district if a future project diminishes the historic district's qualities of concentration, linkage, or continuity that results in a significant impact to the historic district.

Mitigation Measure M-CR-1d: Documentation.

Prior to the issuance of demolition, building, or site permits, the project sponsor shall submit to the department for review photographic and narrative documentation of the subject building, structure, object, material, and landscaping. Documentation may apply to individually significant resources as well as district contributors and shall focus on the elements of the property that the project proposes to demolish or alter. The documentation shall be funded by the project sponsor and undertaken by a qualified professional who meets the standards for history, architectural history, or architecture (as deemed appropriate by the department's preservation staff), as set forth by the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, part 61). The

department's preservation staff will determine the specific scope of the documentation depending upon the individual property's character-defining features and reasons for significance. The documentation scope shall be reviewed and approved by the department prior to any work on the documentation. A documentation package shall consist of the required forms of documentation and shall include a summary of the historic resource and an overview of the documentation provided. The types and level of documentation will be determined by department staff and may include any of the following formats:

- *HABS/HALS-Like Measured Drawings* –A set of Historic American Building/Historic American Landscape Survey-like (HABS/HALS-like) measured drawings that depict the existing size, scale, and dimension of the subject property. The department's preservation staff will accept the original architectural drawings or an as-built set of architectural drawings (plan, section, elevation, etc.). The department's preservation staff will assist the consultant in determining the appropriate level of measured drawings. A cover sheet may be required that describes the historic significance of the property.
- *HABS/HALS-Like Photographs* – Digital photographs of the interior and the exterior of the subject property. Large-format negatives are not required. The scope of the digital photographs shall be reviewed by the department's preservation staff for concurrence, and all digital photography shall be conducted according to current National Park Service standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HABS photography.
- *HABS/HALS-Like Historical Report* – If the department determines that existing survey information or historic resource evaluations of a property do not sufficiently document the historic resources' significant associations, a written historical narrative and report shall be provided in accordance with the HABS/HALS Historical Report Guidelines. The written history shall follow an outline format that begins with a statement of significance supported by the development of the architectural and historical context in which the structure was built and subsequently evolved. The report shall also include architectural description and bibliographic information.
- *Print-on-Demand Book* – The Print-on-Demand book shall be made available to the public for distribution by the project sponsor. The project sponsor shall make the content from the historical report, historical photographs, HABS photography, measured drawings, and field notes available to the public through a preexisting print-on-demand book service. This service will print and mail softcover books containing the aforementioned materials to members of the public who have paid a nominal fee. The project sponsor shall not be required to pay ongoing printing fees once the book has been made available through the service.
- *Digital Recordation* – In coordination with the department's preservation staff, the project sponsor may be required to prepare some other form of digital recordation of the historic resource. The most commonly requested digital recordation is video documentation but other forms of digital recordation, include 3D laser scan models or 3D virtual tours, Gigapan/Matterpoint or other high-resolution immersive panoramic photography, time-lapse photography, photogrammetry, audio/olfactory recording, or other ephemeral documentation of the historic resource may be

required. The purpose of these digital records is to supplement other recordation measures and enhance the collection of reference materials that would be available to the public and inform future research. This digital recordation could also be incorporated into the public interpretation program. Digital recordation shall be conducted by individuals with demonstrated experience in the requested type of digital recordation. If video documentation is required, it shall be conducted by a professional videographer with experience recording architectural resources. The professional videographer shall provide a storyboard of the proposed video recordation for review and approval by the department's preservation staff.

- The project sponsor, in consultation with the department, shall conduct outreach to determine which repositories may be interested in receiving copies of the documentation. Potential repositories include but are not limited to, the San Francisco Public Library, the Environmental Design Library at the University of California, Berkeley, the Northwest Information Center, San Francisco Architectural Heritage, the California Historical Society, and Archive.org. The final approved documentation shall be provided in electronic form to the department and the interested repositories. The department will make electronic versions of the documentation available to the public for their use at no charge.
- The professional(s) shall submit the completed documentation for review and approval by the department's preservation staff. All documentation must be reviewed and approved by the department prior to the issuance of any demolition, building or site permit is approved for a proposed project.

Mitigation Measure M-CR-1e would be required when a future project proposes to demolish or substantially alter an individual resource or historic district whose significance is closely associated with the lifeways or cultural heritage of an individual or group. In such instances, the department may identify that information enhancing an understanding of the resource's significance is not available in traditional written sources but rather has been captured in lived experiences or passed among community members.

Mitigation Measure M-CR-1e: Oral History.

The project sponsor shall retain the services of a qualified historian with experience in oral history to undertake an oral history about the historic resource. This oral history project shall consist of interviews and recollections of individuals with a connection to the historic resource that may include owners, occupants, or other related community members. The success of this effort will depend primarily on the ability of the project sponsor to locate such persons, and on their willingness/ability to participate. Therefore, the project sponsor shall make a good faith effort to publicize the oral history project, conduct public outreach, and identify a wide range of potential interviewees. To accomplish this, the sponsor shall employ a range of measures that may include hosting events that allow participants to record their recollections, and hosting a website that allows interviewees to contribute remotely. Prior to undertaking this effort, the scope and methodology of the oral history project shall be reviewed and approved by the department's preservation staff.

In addition to potentially use for the on-site interpretive program or documentation, the project sponsor shall have the recordings of the oral history project transcribed and indexed, and the department shall host the transcribed and indexed recordings, which will be made available to the public at no charge. The department will also ensure that any information provided in the oral histories are integrated with SF Survey and Citywide historic context statement summarized above. Transcribed and indexed recordings will also be made available to other archives and repositories in order to allow for remote, off-site historical interpretation of the historic resources.

Mitigation Measure M-CR-1f would be required when the department identifies that a future project consistent with the proposed action would result in material impairment to a built-environment historic resource or would involve the removal of physical elements of a historic resource that have discrete and identifiable significance. Such elements may have architectural or design significance, or they may express important community heritage despite lacking aesthetic distinction. In either case, salvage would not reduce a project's impact on the affected resource but would preserve select features that can continue to convey the resource's significance in a new physical context.

Mitigation Measure M-CR-1f: Salvage Plan.

Prior to the issuance of demolition, building, or site permits that would remove character-defining features of a built environment historic resource that would have a significant impact, the project sponsor shall consult with the department's preservation staff as to whether any such features may be salvaged, in whole or in part, during demolition or alteration. The project sponsor shall make a good faith effort to salvage and protect materials of historical interest to be used as part of the interpretive program (if required), incorporated into the architecture of the new building that will be constructed on the site, or offered to non-profit or cultural affiliated groups. If this proves infeasible, the sponsor shall attempt to donate significant character-defining features or features of interpretive or historical interest to a historical organization or other educational or artistic group. The project sponsor shall prepare a salvage plan for review and approval by the department's preservation staff prior to issuance of any site demolition permit.

Mitigation Measures M-CR-1g, M-CR-1h, M-CR-1i, M-CR-1j, and M-CR-1k may be required when a future project demolishes or substantially alters an individual built-environment historic resource or historic district associated with significant social, cultural, architectural, or historical themes or narratives. Measures included in this group would document, commemorate, and interpret the significance of the affected resource and would share that significance to the public through site-specific interpretive media, planning documents, or public programming and events.

Mitigation Measure M-CR-1g: Interpretation.

The project sponsor shall facilitate the development of a public interpretive program focused on the history of the project site, its identified historic resources, and its significant historic context. The interpretive program should be developed and implemented by a qualified design professional with demonstrated experience in displaying information and graphics to the public in a visually interesting

manner, as well as a professionally qualified historian or architectural historian, or community group approved by the department. Through consultation with department preservation staff, coordination with local artists should occur. The primary goal of the program is to educate visitors and future residents about the property's historical themes, associations, and lost contributing features within broader historical, social, and physical landscape contexts.

The interpretive program shall be initially outlined in an interpretive plan subject to review and approval by the department's preservation staff prior to approval of demolition, building, or site permits for the project. The plan shall include the general parameters of the interpretive program including the substance, media, and other elements of the interpretive program. The interpretive program shall include within publicly accessible areas of the project site permanent display(s) of interpretive materials concerning the history and design features of the affected historic resource, including both the site as a whole and the individual contributing buildings and features. The display shall be placed in a prominent, public setting within, on the exterior of, or in the vicinity of newly constructed buildings or other features within the project site. The interpretive material(s) shall be made of durable all-weather materials and may also include digital media in addition to a permanent display. The interpretive material(s) shall be of high quality and installed to allow for high public visibility. Content developed for other mitigation measures, as applicable, including the oral history and documentation programs, may be used to inform and provide content for the interpretive program. For properties that do not have a completed Historic Resource Evaluation, the professionally qualified consultant shall undertake research to sufficiently place the historic resource within its larger historic context (geographic and thematic). The interpretive program may also incorporate video documentation completed under M-CR-1f, Documentation, as applicable to provide a narrated video that describes the materials, construction methods, current condition, historical use, historic context and cultural significance of the historic resource.

The detailed content, media, and other characteristics of such an interpretive program shall be coordinated and approved by the department's preservation staff. The final components of the public interpretation program shall be constructed and an agreed upon schedule for their installation and a plan for their maintenance shall be finalized prior to issuance of a Temporary Certificate of Occupancy.

The interpretive program shall be developed in coordination with the other interpretative programs as relevant, such as interpretation required under archeological resource mitigation measures and tribal cultural resource mitigation measures, Native American land acknowledgments, or other public interpretation programs.

The department will also ensure that any information gathered through the interpretative program development is integrated with SF Survey and Citywide historic context statement summarized above.

Mitigation Measure M-CR-1h: Historic Context.

To assist in the collection of information that will inform and direct the historical interpretation, the sponsor shall fund a historic context study prepared by a professionally qualified historian or

architectural historian, or community group approved by the department to identify significant trends and events associated with a relevant topic to the identified historic resource, as well as identify other associated buildings and sites throughout San Francisco. The objective of this study is to provide background information that will enrich the historical contexts that have already been established for the subject building and to place the subject building within the wider relevant context, for the benefit of the general public interpretation program.

The department will also ensure that the historic context is integrated with SF Survey and Citywide historic context statement summarized above.

Mitigation Measure M-CR-1i: Walking or Building Tour.

The project sponsor shall engage with SF City Guides, or another tour guide group or association as approved by the department's preservation staff, to develop content for a walking or building tour relevant to the historic resource. The project sponsor shall reach out to the list of tour guide groups provided by preservation staff and provide copies of communication with those groups. Once a tour guide group has been identified, the project sponsor shall engage a qualified architectural historian meeting the qualifications set forth in the Secretary of the Interior's Professional Qualification Standards to work with the sponsor and selected tour guide group to develop content for the tour. Tour content shall use information found in the Historic Resources Evaluation and the Historic Resources Evaluation Response prepared for the project, other available background information on the resource, and the content from other mitigation measures. Other existing information, including photographs, news articles, oral histories, memorabilia and video, may be used to develop information for the walking tour as necessary. The qualified architectural historian and scope of work must be reviewed by preservation staff prior to the issuance of demolition, building, or site permits. Preservation staff must review and approve final content of the walking tour and must receive proof of receipt by the approved tour group or association prior to issuance of temporary certificate of occupancy.

Mitigation Measure M-CR-1j: Educational Program.

The project sponsor shall fund the preparation of an educational program that describes the history and significant associations of the historic resource. The scope of the program shall be determined in consultation with the department and shall be prepared by a professionally qualified historian, architectural historian, or historical architecture (as appropriate), as set forth by the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, part 61), or community or educational group approved by the department. The purpose of the educational program is to package the relevant history and significant associations into an educational format that engages the public in the significance of the resource, which could serve as a teaching curriculum or presentation the public could easily understand. Other mitigation measures may provide materials that aid in the preparation of the educational program.

Mitigation Measure M-CR-1k: Community Memorial Event.

For the public benefit in commemorating a publicly accessible historic resource that is significant for association with a community, social group, or neighborhood, the project sponsor shall organize and fund a commemorative event recognizing the historic resource's significance in the form of a public gathering. The project sponsor shall reach out to relevant community groups associated with the historic resource that may be interested in co-sponsoring the organization of the commemorative event. The purpose of the event would be to commemorate the site's history and provide a public space to gather information, stories, or other histories relevant to the historic resource that may inform other mitigation measures including documentation, oral histories, and interpretation. The form of the event shall be determined in coordination with department staff and may take on a variety of forms. This could include a publicly led tour or open house that takes place at the site of the historic resource, or an event held nearby the historic resource.

In addition to the mitigation measures listed above, a project that would result in material impairment to a historic district listed in or eligible for listing in local, state, or national registers would be subject to Mitigation Measure M-CR-1l if the ERO determines that a portion of the previously identified district appears to remain eligible for register listing. The intention of Mitigation Measure M-CR-1l is to revise the district's supporting historical documentation to reflect the district's conditions following the project and to establish an updated district boundary, assuming a portion the previously identified district appears to remain eligible for register listing.

Mitigation Measure M-CR-1l: Revise Historic District Documentation.

The project sponsor shall coordinate with preservation planning staff to determine the project's contribution towards any impairment of a historic district, review the historic district documentation, and determine if the district boundaries should be revised to retain a portion of the district that still expresses some aspects of its historical significance. Based on the extent of contribution, preservation planning staff may require the project sponsor to engage a professionally qualified architectural historian, as set forth by the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, part 61) to prepare documentation of the revised district boundary and justification of its retained integrity. The revised documentation shall be submitted to the appropriate reviewing agency, depending upon its previous level of evaluation or designation. Such documentation may include a historic district assessment report for review by the department's preservation staff, or a National Register of Historic Places designation form for review by the State Historic Preservation Office.

Conclusion

The mitigation measures would partially compensate for impacts associated with future development consistent with the housing element update through feasible design changes, avoidance, preservation, relocation, comprehensive documentation and memorialization of the affected resource. In some cases, one of the above measures or a combination of measures may reduce the impact to less than significant. However, these measures may not fully avoid, rectify, reduce, or compensate for the loss of built-environment historic resources.

Because demolition of built-environment historic resources or alteration in an adverse manner could still occur, the impact would be *significant and unavoidable with mitigation*.

Impact CR-2: The proposed action has the potential to cause a substantial adverse change in the significance of an archeological resource pursuant to section 15064.5. (*Less than Significant with Mitigation*)

The housing element update would increase housing production and shift a greater share of anticipated growth from the east side of the city to well-resourced areas along transit corridors and low-density areas, that are primarily located on the west and north sides of the city. Future development consistent with the housing element update would involve excavation and other ground-disturbance that could result in substantial adverse changes in the significance of archeological resources.

Table 4.2-9 summarizes the the anticipated archeological impacts of future development consistent with the housing element update. For each planning district, the table presents the number of housing units anticipated under 2050 environmental baseline and the net new number of housing units projected under the proposed action. The table presents the potential for impacts to both Native American and historic-period archeological resources under the proposed action as well as the overall archeological impact of the proposed action. This comparison supports the anticipated magnitude of change in potential archeological impacts for each planning district, which are presented in the farthest right column of the table.

Significant impacts to both Native American and historic-period archeological resources are anticipated under both the 2050 environmental baseline and the proposed action because each would involve ground disturbing activities that could cause a substantial adverse change in significance of an archeological resource. However, **Table 4.2-9** identifies whether the future development consistent with the housing element update would have an increased or reduced impact compared to the 2050 environmental baseline. The finding of increased or reduced impact is based on whether future development consistent with the housing element update would result in more or fewer future housing units in archeologically sensitive areas of a planning district—and thus a greater or lesser likelihood of materially impairing the significance of an archeological resource—when compared against the 2050 environmental baseline. For example, it is anticipated future development consistent with the housing element update would result in fewer housing units in the Bernal Heights planning district by 2050 compared to the 2050 environmental baseline. This archeological resource impact analysis did not specifically focus on anticipated building height changes resulting from future development consistent with the proposed action; while height increases can result in the need for deeper foundations in some cases and therefore deeper soil disturbance, this is one of many factors in determining archeological impacts.

Table 4.2-9: Summary of Archeological Resource Impacts from Future Development Consistent with the Housing Element Update

Planning District	Housing Units under the 2050 Environmental Baseline ^a	Net New Housing Units under the Proposed Action ^b	Potential for Impacts to Native American Archeological Resources under Proposed Action	Potential for Impacts to Historic-Period Archeological Resources under Proposed Action	Overall Archeological Impact Potential of Proposed Action	Magnitude of Impact under Proposed Action Relative to 2050 Environmental Baseline
Bernal Heights	300	100 (- 200)	Low to Moderate	Low to Moderate	Low to Moderate	Reduced
Buena Vista	1,300	2,900 (+1,600)	Moderate	Moderate in central-eastern portion	Moderate depending on location	Increased
Central	200	3,600 (+3,400)	Low except moderate to high in southern tip	Moderate in center of district	Low to moderate	Increased
Downtown	7,000	5,200 (-1,800)	High	High	High	Reduced
Ingleside	13,100	22,000 (+8,900)	High along Lake Merced	Moderate for late 19 th -century agricultural and recreational sites	Low to high depending on location	Increased
Inner Sunset	600	12,500 (+11,900)	High for surface and buried sites along northern border and moderate in center around historical water sources; otherwise low	Moderate for late 19 th -century agricultural, recreational and institutional sites; otherwise low	Low to high depending on location, generally low	Increased
Marina	300	4,500 (+4,200)	High in center for surface and buried sites; high along northern edge for submerged sites; low elsewhere	High in center of district, moderate elsewhere	Low to high depending on location	Increased
Mission	10,100	8,800 (-1,300)	High	High	High	Reduced

Planning District	Housing Units under the 2050 Environmental Baseline ^a	Net New Housing Units under the Proposed Action ^b	Potential for Impacts to Native American Archeological Resources under Proposed Action	Potential for Impacts to Historic-Period Archeological Resources under Proposed Action	Overall Archeological Impact Potential of Proposed Action	Magnitude of Impact under Proposed Action Relative to 2050 Environmental Baseline
Northeast	700	1,500 (+800)	High for near surface and buried along historic bay margins and for submerged immediately offshore of historic bay margin	High	High	Increased
Outer Sunset	1,000	11,900 (+10,900)	High along planning district boundaries and near historical water sources for surface and buried sites along Great Highway and northern margin; low in rest of district	Moderate for late 19th-century agricultural and recreational sites	Low to high depending on location, generally low	Increased
Richmond	2,400	14,800 (+12,400)	Moderate to high along planning district boundaries and near historical water sources for surface and buried sites along Great Highway and northern margin; low in rest of district	Moderate for late 19th-century agricultural and recreational sites; moderate to high around former cemeteries in east end	Low to high depending on location, generally low	Increased
South Bayshore	15,300	14,700 (-600)	High sensitivity along historical water sources and historical bayshore	High sensitivity in central-north portion of the district along historical shoreline and in area of Yosemite Slough	High	Reduced

Planning District	Housing Units under the 2050 Environmental Baseline ^a	Net New Housing Units under the Proposed Action ^b	Potential for Impacts to Native American Archeological Resources under Proposed Action	Potential for Impacts to Historic-Period Archeological Resources under Proposed Action	Overall Archeological Impact Potential of Proposed Action	Magnitude of Impact under Proposed Action Relative to 2050 Environmental Baseline
South Central	2,200	1,600 (-600)	Moderate to high for surface and buried sites around historical water sources and planning district boundaries; otherwise low	Generally low sensitivity; isolated areas of high sensitivity in southeast and northwest portions of the district	Low to high depending on location, generally low	Reduced
South of Market	31,400	25,600 (-5,800)	High sensitivity for surface and buried sites along historical shoreline, high sensitivity for submerged sites along Mission Creek and east of historical bay shoreline	Generally high sensitivity; low sensitivity along southwest corner	High	Reduced
Western Addition	5,700	11,800 (+6,100)	High for surface and buried sites around historical water sources	Moderate to high around former cemeteries in west end; low in rest of district	Low to high depending on location	Increased

Source: ICF, *San Francisco Housing Element Update 2022 Archeological Sensitivity Assessment*, Environmental Case Number 2019-016230ENV, 2022.

Notes: No net new housing units are projected in the Golden Gate Park, Presidio, or Treasure Island planning districts; thus, those planning districts are not included in this table.

- ^a Estimated net new housing units projected by 2050 based on existing zoning and housing policy. These numbers are approximations developed through modeling for the purpose of impact analysis. They are not intended to represent an exact number of units that will be developed, but to reflect relative magnitude of projected development by planning district. Figure 2-6 in Chapter 2, Project Description, shows the projected difference in housing growth and distribution in the city between 2020 conditions and the 2050 environmental baseline. Numbers have been rounded and will not sum to the total.
- ^b Estimated net new housing units by 2050 based on adoption of housing element update. These projections are approximations developed to support impact analysis, and do not represent a cap or quota. It is not expected that adoption of the housing element update would lead to development of exactly this number of housing units. The projected number of housing units under the proposed action in each planning district is followed by the numerical increase or decrease in projected housing units in that planning district (in parentheses) relative to the number of housing units projected for that planning district under the 2050 environmental baseline. Figure 2-11, in Chapter 2, Project Description, shows the projected difference in housing unit growth and distribution between the 2050 environmental baseline and the proposed action. Numbers have been rounded and will not sum to the total.

Archeological impacts under the 2050 environmental baseline would be concentrated in the South of Market, Downtown, Western Addition and Mission planning districts, in the central-east part of the city, the area in the Ingleside planning district between Lake Merced and 19th Avenue, and in the eastern/southeastern part of the South Bayshore planning district. The potential for impacts in these areas is elevated under 2050 environmental baseline because these districts are archeologically sensitive and are projected to see substantial housing development. Future development consistent with the housing element update would also be expected to result in archeological impacts in these planning districts, but the magnitude of potential archeological impacts in the South of Market, Downtown, Mission, and South Bayshore planning districts would be reduced, to varying degrees, under the proposed action because there a smaller proportion of overall development is projected to be built in these areas with higher archeological sensitivity. In contrast, the magnitude of the impact under the proposed action, relative to the 2050 environmental baseline, would increase in the archeologically-sensitive Western Addition and Ingleside planning districts, where a larger number of housing units are projected under the proposed action. However, much of the projected future increase in development consistent with the housing element update, relative to the 2050 environmental baseline, would occur in the Inner and Outer Sunset and Richmond planning districts in the western part of the city that, with the exception of limited areas, are relatively less sensitive for archeological resources. Thus, while the potential for impacts due to the increase in number of housing units in these planning districts exists, the potential for impacts remains relatively low due to the lower sensitivity of these areas.

Under the proposed action, the central and northern parts of the city (including the Marina, western part of the Northeast, Western Addition, Buena Vista, and Central planning districts) would have an increased number of housing units relative to the 2050 environmental baseline. The potential for archeological impacts in these areas, in particular the Marina, where the projected increase in number of housing units is relatively large, would increase. However, the potential for impacts in the Central and Buena Vista districts would be generally low, because of the overall archeological sensitivity of these planning districts is generally no more than moderate for most locations.

In summary, the shift in the projected geographic distribution of housing development consistent with the proposed action as compared with number of units and distribution under the 2050 environmental baseline, would reduce the potential for significant archeological impacts in some areas of high archeological sensitivity in the eastern and northern planning districts of the city, to the extent that fewer locations are subject to ground disturbing development. The change would increase the potential for archeological impacts in the western planning districts of the city, where overall archeological sensitivity is generally lower, but the potential for impacts would remain relatively low except at the relatively limited higher sensitivity locations within these planning districts (see Figures 23 to 26 in Appendix F.2 of this EIR).

Based on this program-level archeological sensitivity assessment (see Appendix F.2 of this EIR), development consistent with the proposed action has the potential to result in *significant* impacts on archeological resources. The potential for significant archeological resources to be present at a particular location, to have survived past development, and to be affected by future development consistent with the housing element update must necessarily be assessed in more detail at the time a specific project is proposed. This is the case because, although it is possible to make generalizations about the patterns of Native American archeological and historic

land use and development at a neighborhood or district level, the archeological impact potential of each individual project site can be determined only by consideration of the specific project site and the proposed development of that site. This potential would be assessed at the project level through the department's preliminary archeological review process, as detailed below.

Preliminary Archeological Review Process

Consistent with the department's standard operating procedures, the department's qualified archeological staff will determine whether preliminary archeological review is required at the time a project application is submitted. The objective is to assess whether the project has potential to result in a significant impact to archeological resources, and if so, which of the department's standard mitigation measures may be required to mitigate impacts. This determination is made for projects that would entail soil-disturbing or soil-improving activities such as excavation, utility installation, grading, soil remediation, pile driving, or compaction/chemical grouting, unless. This determination is based on the mapped archeological sensitivity of the project location¹⁰² and the extent, volume, and depth of proposed project soil disturbance.

Due to the extent of prior development in the city, most archeological resources in San Francisco are not visible on the surface. To assess impact potential and appropriate treatments, department archeological staff will review a specific project's location and footprint; existing archeological site data on file with the department; relevant historical archival maps and records; site soils and stratigraphic data provided by geotechnical coring; historic environmental mapping; and Native American archeological sensitivity modeling. The appropriate treatment identified would also consider the depth and extent of proposed construction excavations; the depth at which resources of the anticipated types may occur; existing site conditions (e.g., whether there is sufficient open space on the project site prior to demolition of existing development to conduct meaningful archeological identification efforts); proposed construction procedures (e.g., whether pilings, which could affect undetected resources, would be driven prior to excavation of the parcel); and the feasibility and effectiveness of archeological testing or monitoring as assessed by the department archeologist.

In some cases, department archeological staff may require more intensive archival research or archeological investigation of a project site by a qualified archeologist, as part of the CEQA review, to more definitively assess archeological potential and the potential for project-specific construction impacts. This additional sensitivity analysis would only occur when department archeological staff has determined a very high potential for significant archeological resources to be-present within the project site and where additional assessment might definitively determine the presence or absence of resources.

Preliminary archeological review is generally required for projects in known archeologically sensitive areas that involve ground-disturbing activities. However, preliminary archeological review is generally not required for projects that are determined by department archeological staff to have limited potential to result in significant impacts to significant archeological resources because they would entail minimal excavation, would entail

¹⁰² Archeological sensitivity mapping delineates the relative archeological sensitivity of each area of the city based on location, known resources, development history, and Native American archeological resource sensitivity modeling. The department's archeological sensitivity mapping is subject to updates based on new data, at the discretion of department archeological staff.

excavations or piles within the footprint of an existing building or structure, or are in locations identified with low archeological sensitivity.

Outcome of the Preliminary Archeological Review Process

Based on the conclusions of preliminary archeological review, the department would identify which, if any, of the following mitigation measures would be required to mitigate the potential archeological impacts of construction of future development projects consistent with the housing element update: Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance, and, as applicable, Mitigation Measure-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources.

Mitigation Measure M-CR-2a details all treatment, consultation, reporting, and interpretation measures required to address archeological resources, whether they are discovered during construction, or during archeological monitoring or testing. For this reason, future development consistent with the housing element update requiring, as applicable, archeological monitoring (Mitigation Measure M-CR-2b), archeological testing (Mitigation Measure M-CR-2c), and treatment of submerged and buried resources (Mitigation Measure M-CR-2d), would also require implementation of Mitigation Measure M-CR-2a.

While project-specific preliminary archeological review is the basis for determining the appropriate mitigation measure(s), the following general criteria would direct the selection of the appropriate mitigation measures:

- Mitigation Measure M-CR-2a applies to project sites with moderate archeological sensitivity, anticipated archeological site types that would be identifiable by construction crews, and construction methods that allow for archeological site identification (such as shallow excavation). It may be implemented independently of other archeological mitigation measures for projects for which preliminary archeological review does not require archeological monitoring or testing as well as in conjunction with, as applicable, Mitigation Measures M-CR-2b, -2c, and -2d for projects for which archeological monitoring, testing or data recovery is required.
- Mitigation Measure M-CR-2b applies to project sites with moderate to high archeological sensitivity, archeological site types that require a trained archeologist for identification, and where construction permits adequate archeological observation of and access to exposed soils.
- Mitigation Measure M-CR-2c applies to project sites with moderate to high archeological sensitivity; archeological site types that require a trained archeologist for identification; and archeological site types that may require immediate or complex treatment or data recovery efforts or where construction methods would include activities that would not expose soils for archeological observations or where construction soil exposures could not be closely observed by an archeologist, such as installation of deep foundations or deep trenching.
- Mitigation Measure M-CR-2d applies to future projects that would include subgrade excavation to depths that would penetrate to native soil or below Young Bay Mud, or entail the use of piles, soil improvements or

other deep foundations in landfill areas within former creeks, ponds, bay marshes or waters of the bay that may be sensitive for submerged or deeply buried historical or Native American archeological resources. The measure would be implemented in the event of the discovery of a submerged or deeply buried resource during archeological testing or soil-disturbing construction activities.

In addition, if during preliminary archeological review the department identifies a high potential for a project to result in impacts to a Native American archeological resource, the department would notify Native American tribal representatives of that finding as required by Mitigation Measure M-TCR-1: Tribal Cultural Resources Notification and Consultation in Section 4.3, Tribal Cultural Resources. As discussed in Section 4.3, based on tribal cultural resources consultation, Native American archeological resources are presumed to be tribal cultural resources. Tribal cultural resources notification and consultation, which would be implemented in tandem with the mitigation measures below, requires that Native American representatives be notified of projects that have the potential to impact Native American archeological resources and other tribal cultural resources as identified through consultation and are offered the opportunity to consult on the treatment and interpretation of such resources to ensure that Native American cultural values are prioritized in the treatment and interpretation of Native American archeological and other tribal cultural resources.

Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance.

The following mitigation measure shall be implemented for any project for which the preliminary archeological review conducted by department staff identifies the potential for significant archeological impacts. This measure applies to discoveries made in the absence of an archeologist and to discoveries during archeological monitoring or testing.

ALERT sheet. The project sponsor shall distribute the planning department archeological resource “ALERT” sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils-disturbing activities within the project site. Prior to any soils-disturbing activities being undertaken, each contractor is responsible for ensuring that the “ALERT” sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the environmental review officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel involved in soil-disturbing activities have received copies of the “ALERT” sheet.

Procedures Upon Discovery of a Suspected Archeological Resource. The following measures shall be implemented in the event of a suspected archeological discovery during project soil-disturbing activities:

Discovery Stop Work and Environmental Review Officer Notification. Should any indication of an archeological resource be encountered during any soils-disturbing activity of the project, the project sponsor shall immediately notify the ERO and shall immediately suspend any soils-disturbing activities in the vicinity of the discovery and protect the find in place until the significance of the find has been

evaluated and the ERO has determined whether and what additional measures are warranted, and these measures have been implemented, as detailed below.

Archeological Consultant Identification. If the preliminary archeological review did not require archeological monitoring or testing, and an archeological discovery during construction occurs prior to the identification of a project archeologist, and the ERO determines that the discovery may represent a significant archeological resource, the project sponsor shall retain the services of an archeological consultant (hereinafter “project archeologist”) from a firm listed on the Qualified Archeological Consultant list maintained by the department to identify, document, and evaluate the resource, under the direction of the ERO. The project sponsor shall ensure that the project archeologist or designee is empowered, for the remainder of soil-disturbing project activity, to halt soil disturbing activity in the vicinity of potential archeological finds, and that work remains halted until the discovery has been assessed and a treatment determination made, as detailed below.

Resource Evaluation and Treatment Determination. If an archeological find is encountered during construction or archeological monitoring or testing, the project archeologist shall redirect soil-disturbing and heavy equipment activity in the vicinity away from the find. If in the case of pile driving activity (e.g., foundation, shoring, etc.), the project archeologist has cause to believe that the pile driving activity may affect an archeological resource, the project sponsor shall ensure that pile driving is halted until an appropriate evaluation of the resource has been made. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

Initial documentation and assessment. The project archeologist shall document the find and make a reasonable effort to assess its identity, integrity, and significance of the encountered archeological deposit through sampling or testing, as needed. The project sponsor shall make provisions to ensure that the project archeologist can safely enter the excavation, if feasible. The project sponsor shall ensure that the find is protected until the ERO has been consulted and has determined appropriate subsequent treatment in consultation with the project archeologist, and the treatment has been implemented, as detailed below.

The project archeologist shall make a preliminary assessment of the significant and physical integrity of the archeological resource and shall present the findings to the ERO. If, based on this information, the ERO determines that construction would result in impacts to a significant resource, the ERO shall consult with the project sponsor and other parties regarding the feasibility and effectiveness of preservation-in-place of the resource, as detailed below.

Native American Archeological Deposits and Tribal Notification. All Native American archeological deposits shall be assumed to be significant unless determined otherwise in consultation with the ERO. If a Native American archeological deposit is encountered, soil disturbing work shall be halted as detailed above. In addition, the ERO shall notify any tribal representatives who, in response to the project tribal cultural resource notification, requested to be notified of discovery of Native American archeological resources in order to coordinate on the treatment of archeological and tribal cultural resources. Further

the project archeologist shall offer a Native American representative the opportunity to monitor any subsequent soil disturbing activity that could affect the find.

Submerged Paleosols. Should a submerged paleosol be identified, the project archeologist shall extract and process samples for dating, paleobotanical analysis, and other applicable special analyses pertinent to identification of possible cultural soils and for environmental reconstruction.

Archeological Site Records. After assessment of any discovered resources, the project archeologist shall prepare an archeological site record or primary record (DPR 523 series) for each documented resource. In addition, a primary record shall be prepared for any prehistoric isolate. Each such record shall be accompanied by a map and GIS location file. Records shall be submitted to the planning department for review as attachments to the archeological resources report (see below) and once approved by the ERO, to the Northwest Information Center.

Plans and Reports. All archeological plans and reports identified herein and in the subsequent measures, shall be submitted by the project archeologist directly to the ERO for review and comment and shall be considered draft reports subject to revision until final approval by the ERO. The project archeologist may submit draft reports to the project sponsor simultaneously with submittal to ERO.

Limit on Construction Delays for Archeological Treatment. Archeological testing and as applicable data recovery programs required to address archeological discoveries, pursuant to this measure, could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines.

Preservation-in-Place Consideration. Should an archeological resource that meets California register significance criteria be discovered during construction, archeological testing, or monitoring, preservation-in-place (i.e., permanently protect the resource from further disturbance and take actions, as needed, to preserve depositional and physical integrity) of the entire deposit or feature is the preferred treatment option. The ERO shall consult with the project sponsor and, for Native American archeological resources, with tribal representatives, if requested, to consider 1) the feasibility of permanently preserving the resource in place, feasible and effective, the project archeologist, in consultation with the ERO, shall prepare a Cultural Resources Preservation Plan. For Native American archeological resources, the project archeologist shall also consult with the tribal representatives, and the Cultural Resources Preservation Plan shall take into consideration the cultural significance of the tribal cultural resource to the tribes. Preservation options may include measures such as design of the project layout to place open space over the resource location; foundation design to avoid the use of pilings or deep excavations in the sensitive area; a plan to expose and conserve the resource and include it in an on-site interpretive exhibit; tribal representatives for review and for ERO approval. The project sponsor shall ensure that the approved plan is implemented and shall coordinate with the department to ensure that disturbance of the resource will not occur in future, such as establishing a preservation easement.

If, based on this consultation, the ERO determines that preservation-in-place is infeasible or would be ineffective in preserving the significance of the resource, archeological data recovery and public interpretation of the resource shall be carried out, as detailed below. The ERO in consultation with the project archeologist shall also determine whether and what additional treatment is warranted, which may include additional testing, construction monitoring, and public interpretation of the resource, as detailed below.

Coordination with Descendant Communities. On discovery of an archeological site associated with descendant Native Americans, Chinese, or other identified descendant cultural group, the project archeologist shall contact an appropriate representative of the descendant group and the ERO. The representative of the descendant group shall be offered the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site and data recovered from the site, and, if applicable, any interpretative treatment of the site. The project archeologist shall provide a copy of the Archeological Resources Report (ARR) to the representative of the descendant group.

Compensation. Following on the initial tribal consultation, the ERO, project sponsor and project archeologist, as appropriate, shall work with the tribal representative or other descendant or descendant community representatives to identify the scope of work for a representative to fulfill the requirements of this mitigation measure, which may include participation in archeological monitoring, preparation and review of deliverables (e.g., plans, interpretive materials, art work). Tribal representatives or other descendant community representatives for archeological resources or tribal cultural resources, who complete tasks in the agreed upon scope of work project, shall be compensated for their work as identified in the agreed upon scope of work.

Archeological Data Recovery Program. The project archeologist shall prepare an archeological data recovery plan if all three of the following apply: (1) a potentially significant resource is discovered, (2) preservation-in-place is not feasible, as determined by the ERO after implementation of the Preservation-in-Place Consideration procedures, and (3) the ERO determines that archeological data recovery is warranted. When the ERO makes such a determination, the project archeologist, project sponsor, ERO and, for tribal cultural archeological resources, the tribal representative, if requested by a tribe, shall consult on the scope of the data recovery program. The project archeologist shall prepare a draft archeological data recovery plan and submit it to the ERO for review and approval. If the time needed for preparation and review of a comprehensive archeological data recovery plan would result in a significant construction delay, the scope of data recovery may instead be agreed upon in consultation between the project archeologist and the ERO and documented by the project archeologist in a memo to the ERO. The archeological data recovery plan/memo shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the archeological data recovery plan/memo will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the property that could be adversely affected by the proposed

project. Destructive data recovery methods shall not be applied to portions of the archeological resource that would not otherwise be disturbed by construction if nondestructive methods are practical.

The archeological data recovery plan shall include the following elements:

- Field Methods and Procedures: Descriptions of proposed field strategies, procedures, and operations
- Cataloguing and Laboratory Analysis: Description of selected cataloguing system and artifact analysis procedures
- Discard Policy: Description of and rationale for field and post-field discard and deaccession policies
- Security Measures: Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities
- Report of Data Recovery Results: Description of proposed report format and distribution of results
- Public Interpretation: Description of potential types of interpretive products and locations of interpretive exhibits based on consultation with project sponsor
- Curation: Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities

The project archeologist shall implement the archeological data recovery program upon approval of the archeological data recovery plan/memo by the ERO.

Coordination of Archeological Data Recovery Investigations. In cases in which the same resource has been or is being affected by another project for which data recovery has been conducted, is in progress, or is planned, the following measures shall be implemented to maximize the scientific and interpretive value of the data recovered from both archeological investigations:

- In cases where an investigation has not yet begun, project archeologists for each project impacting the same resource and the ERO, as applicable, shall consult on coordinating and collaborating on archeological research design, data recovery methods, analytical methods, reporting, curation and interpretation to ensure consistent data recovery and treatment of the resource.
- In cases where archeological data recovery investigation is under way or has been completed for a project, the project archeologist for the subsequent project shall consult with the prior project archeologist, if available; review prior treatment plans, findings and reporting; and inspect and assess existing archeological collections/inventories from the site prior to preparation of the archeological treatment plan for the subsequent discovery, and shall incorporate prior findings in the final report for the subsequent investigation. The objectives of this coordination and review of prior methods and findings shall be to identify refined research questions; determine appropriate

data recovery methods and analyses; assess new findings relative to prior research findings; and integrate prior findings into subsequent reporting and interpretation.

Treatment of Human Remains and Funerary Objects. If human remains or suspected human remains are encountered during construction, the contractor and project sponsor shall ensure that ground-disturbing work within 50 feet of the remains is halted immediately and shall arrange for the protection in place of the remains until appropriate treatment and disposition have been agreed upon and implemented in accordance with this measure. The treatment of any human remains and funerary objects discovered during any soil-disturbing activity shall comply with applicable state laws, including Health and Safety Code section 7050.5 and Public Resources Code section 5097.98. Upon determining that the remains are human, the project archeologist shall immediately notify the Medical Examiner of the City and County of San Francisco, the ERO, and the project sponsor of the find.

If the remains cannot be permanently preserved in place, the landowner or designee shall consult with the most likely descendant and may consult with the project archeologist, project sponsor and the ERO on recovery of the remains and any scientific treatment alternatives. The landowner shall then make all reasonable efforts to develop a burial agreement (agreement) with the most likely descendant, as expeditiously as possible, for the treatment and disposition, with appropriate dignity, of human remains and funerary objects (as detailed in CEQA Guidelines section 15064.5(d)). Per Public Resources Code section 5097.98(c)(1), the agreement shall address, as applicable and to the degree consistent with the wishes of the most likely descendant, the appropriate excavation, removal, recordation, scientific analysis, custodianship prior to reinterment or curation, and final disposition of the human remains and funerary objects. If the most likely descendant agrees to scientific analyses of the remains and/or funerary objects, the project archeologist shall retain possession of the remains and funerary objects until completion of any such analyses, after which the remains and funerary objects shall be reinterred or curated as specified in the agreement.

If the landowner or designee and the most likely descendant are unable to reach an agreement on scientific treatment of the remains and/or funerary objects, the ERO, in consultation with the project sponsor shall ensure that the remains and/or funerary objects are stored securely and respectfully until they can be reinterred on the project site, with appropriate dignity, in a location not subject to further or future subsurface disturbance, in accordance with the provisions of state law.

Treatment of historic-period human remains and/or funerary objects discovered during any soil-disturbing activity shall be in accordance with protocols laid out in the research design in the project archeological monitoring plan, archeological testing plan, archeological data recovery plan, and other relevant agreements established between the project sponsor, medical examiner, and the ERO. The project archeologist shall retain custody of the remains and associated materials while any scientific study scoped in the treatment document is conducted and the remains shall then be curated or respectfully reinterred by arrangement on a case-by case-basis.

Cultural Resources Public Interpretation Plan and Land Acknowledgement. If a significant archeological resource (i.e., a historical resource or unique archeological resources as defined by CEQA Guidelines

section 15064.5) is identified and the ERO determines in consultation with Native American representatives for Native American archeological resources, that the public interpretation is warranted, the project archeologist shall prepare a Cultural Resources Public Interpretation Plan. The Cultural Resources Public Interpretation Plan shall describe the interpretive products, locations or distribution of interpretive materials or displays, the proposed content and materials, the producers or artists of the displays or installation, and a long-term maintenance program.

If the resource to be interpreted is a tribal cultural resource, the department shall notify Native American tribal representatives that public interpretation is being planned. If requested by tribal representatives, the Cultural Resources Public Interpretation Plan shall be prepared in consultation with and developed with the participation of Native American tribal representatives. For public projects or projects that include dedicated public spaces, the interpretive materials may include an acknowledgement that the project is located upon traditional Ohlone lands. For interpretation of a tribal cultural resource, the interpretive program may include a combination of artwork, preferably by local Native American artists, educational panels or other informational displays, a plaque, or other interpretative elements including digital products that address Native American experience and the layers of history. As feasible, and where landscaping is proposed, the interpretive effort may include the use and the interpretation of native and traditional plants incorporated into the proposed landscaping.

The project archeologist shall submit the cultural resources public interpretation plan and drafts of any interpretive materials that are subsequently prepared to the ERO for review and approval. The project sponsor shall ensure that the cultural resources public interpretation plan is implemented prior to occupancy of the project.

Archeological Resources Report. If significant archeological resources, as defined by CEQA Guidelines section 15064.5, are encountered, the project archeologist shall submit a confidential draft Archeological Resources Report to the ERO. This report shall evaluate the significance of any discovered archeological resource, describe the archeological and historical research methods employed in the archeological programs undertaken, the results and interpretation of analyses, and discuss curation arrangements.

Once approved by the ERO, the project archeologist shall distribute the approved Archeological Resources Report as follows: copies that meet current information center requirements at the time the report is completed to the California Archeological Site Survey Northwest Information Center, and a copy of the transmittal of the approved Archeological Resources Report to the Northwest Information Center to the ERO; one bound hardcopy of the Archeological Resources Report, along with digital files that include an unlocked, searchable PDF version of the Archeological Resources Report, GIS shapefiles of the site and feature locations, any formal site recordation forms (CA DPR 523 series), and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources, via USB or other stable storage device, to the environmental planning division of the planning department; and, if a descendant group was consulted, a digital or hard copy of the Archeological Resources Report to the descendant group, depending on their preference.

Curation. If archeological data recovery is undertaken, the project archeologist and the project sponsor shall ensure that any significant archeological collections and paleoenvironmental samples of future research value shall be permanently curated at an established curatorial facility. The facility shall be selected in consultation with the ERO. Upon submittal of the collection for curation the project sponsor or archeologist shall provide a copy of the signed curatorial agreement to the ERO.

Mitigation Measure M-CR-2b: Archeological Monitoring Program.

If required based on the outcome of preliminary archeological review conducted by department staff, to avoid and mitigate impacts from the proposed action on significant archeological resources found during construction, the project archeologist shall develop and implement an archeological monitoring program as specified herein, and shall conduct an archeological testing and/or data recovery program if required to address archeological discoveries or the assessed potential for archeological discoveries, pursuant to this measure and Mitigation Measure M-CR-2a.

Qualified Archeologist Identification. After the first project approval action or as directed by the environmental review officer (ERO), the project sponsor shall contact the department archeologist to obtain the names and contact information for three qualified archeological consultants on the department's list of qualified archeological consultants, and shall retain one of those archeological consultants ("project archeologist") to develop and implement an archeological monitoring program under the direction of the ERO.

Construction Crew Archeological Awareness. Prior to any soil-disturbing activity, the project archeologist shall conduct a brief on-site archeological awareness training that describes the types of resources that might be encountered and how they might be recognized, and requirements and procedures for work stoppage, resource protection and notification in the event of a potential archeological discovery. The project archeologist also shall distribute an "Alert" wallet card (based on the department's "ALERT" sheet) to all field personnel (e.g., machine operators, field crew, pile drivers, supervisory personnel) involved in soil disturbing activities, which summarizes stop work requirements and provides information on how to contact the project archeologist and ERO. The project archeologist shall repeat the training at intervals during construction, as determined necessary by the ERO, including when new construction personnel start work and prior to periods of soil disturbing work when the project archeologist will not be on site.

Tribal Cultural Resources Sensitivity Training. In addition to the archeological awareness training, for sites at which the ERO has determined that there is the potential for the discovery of Native American archeological resources or if requested by a tribe pursuant to the department's tribal cultural resources notification process, the project sponsor shall ensure that a Native American representative is afforded the opportunity to provide a Native American cultural resources sensitivity training to all construction personnel.

Archeological Monitoring Program. Based on the results of information provided in the preliminary archeological review and additional historical research as needed, the project archeologist shall consult

with the ERO prior to the commencement of any project-related soils disturbing activities to determine the appropriate scope of archeological monitoring, allowing for required document preparation and review time. The archeological monitoring program shall be set forth in an Archeological Monitoring Plan, as detailed below.

The project archeologist shall be present on the project site according to a schedule agreed upon by the project archeologist and the ERO until the ERO has, in consultation with the project archeologist, determined that project construction activities could have no effects on significant archeological deposits. The project archeologist shall prepare a daily monitoring log documenting activities and locations monitored, soil disturbance depth, stratigraphy, and findings.

The project archeologist has the authority to temporarily stop soil disturbing construction activity in the vicinity of a suspected find to document the resource, collect samples as needed, and assess its significance. The project sponsor shall ensure that the find is protected in place in accordance with the archeologist's direction, and that it remains protected until the archeologist, after consultation with the ERO, notifies the project sponsor that assessment and any subsequent mitigation are complete. The project sponsor shall also ensure that the construction foreperson or other on-site delegee, is aware of the stop work and protection requirements.

In the event of a discovery of a potentially significant archeological resources during monitoring or construction, the project archeologist shall conduct preliminary testing of the discovery, including the collection of soil samples and artifactual/ ecofactual material, as needed to assess potential significance and integrity. Once this initial assessment has been made, the project archeologist shall consult with the ERO on the results of the assessment. If the resource is assessed as potentially significant, the project sponsor shall ensure that soil disturbance remains halted at the discovery location until appropriate treatment has been determined in consultation with the ERO and implemented, as detailed below.

Archeological Monitoring Plan. The archeological monitoring plan shall include the following provisions:

- Project Description: Description of all anticipated soil disturbing activities (e.g., foundation and utility demolition, hazardous soils remediation, site grading, shoring excavations, piles or soil improvements, and foundation, elevator, car stacker, utility, and landscaping excavations), with project plans and profiles, as needed, to illustrate the anticipated soil disturbance.
- Site Specific Environmental and Cultural Context: Pre-contact and historic environmental and cultural setting of the project site as pertains to potential Native American use and historic period development; any available information pertaining to subsequent soil disturbance, current knowledge of soil stratigraphy. As appropriate based on the scale and scope of the project, the Archeological Monitoring Plan should include historic maps, as a basis for predicting resource types that might be encountered and their potential locations. An overlay of the project site on the city's prehistoric sensitivity model mapping should be included, as should the locations of all known archeological sites within 0.25 mile of the project site.

- Anticipated Resources or Resource Types: Likely resources that might be encountered and at what locations and depths, based on known resources in the vicinity, the site's predevelopment setting and development history, and the anticipated depth and extent of project soil disturbances.
- Proposed Scope of Archeological Monitoring: Include soil-disturbing activities/ disturbance depths to be monitored.
- Synopsis of Required Procedures: For the assessment and treatment of discoveries, ERO and Native American consultation requirements; burial treatment procedures; and reporting and curation requirements, consistent with the specifications of Mitigation Measure M-CR-2a.

Resource Evaluation and Treatment Determination. Upon discovery of a suspected archeological resource during construction or archeological monitoring, Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations shall be implemented as specified in that measure.

Additional Applicable Measures. If a significant archeological resource is identified, and data recovery is required under Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations, the following additional measures identified in the Mitigation Measure M-CR-2a shall be implemented as specified in that measure:

- Archeological Data Recovery Program
- Treatment of Human Remains and Funerary Objects (as applicable)
- Coordination of Archeological Data Recovery Investigations
- Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable)
- Archeological Resources Report
- Curation

Mitigation Measure M-CR-2c: Archeological Testing Program.

If required based on the outcome of preliminary archeological review conducted by department staff, to avoid and mitigate impacts from the proposed action on significant archeological resources found during construction, the project archeologist shall develop and implement an archeological testing program as specified herein, and shall conduct an archeological monitoring and/or data recovery program if required to address archeological discoveries or the assessed potential for archeological discoveries, pursuant to this measure and Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance.

Qualified Archeologist Identification. After the first project approval action or as directed by the ERO, the project sponsor shall contact the department archeologist to obtain the names and contact information for the next three qualified archeological consultants on the department's list and shall retain a qualified

archeologist (hereinafter “project archeologist”) from this list of three to develop and implement the archeological testing program.

Construction Crew Archeological Awareness. Prior to any soils-disturbing activities being undertaken, the project archeologist shall conduct a brief on-site archeological awareness training that describes the types of resources that might be encountered and how they might be recognized, and requirements and procedures for work stoppage, resource protection and notification in the event of a potential archeological discovery. The project archeologist also shall distribute an “Alert” wallet card, based on the department’s “ALERT” sheet, that summarizes stop work requirements and provides necessary contact information for the project archeologist, project sponsor and the to all field personnel involved in soil disturbing activities, including machine operators, field crew, pile drivers, supervisory personnel, etc., have received. The project archeologist shall repeat the training at intervals during construction, as determined necessary by the ERO, including when new construction personnel start work and prior to periods of soil disturbing work when the project archeologist will not be on site.

Tribal Cultural Resources Sensitivity Training. In addition to and concurrently with the archeological awareness training, for sites at which the ERO has determined that there is the potential for the discovery of Native American archeological resources or if requested by a tribe pursuant to the department’s tribal cultural resources notification process, the project sponsor shall ensure that a Native American representative is afforded the opportunity to provide a Native American cultural resources sensitivity training to all construction personnel.

Archeological Testing Program. The project archeologist shall develop and undertake an archeological testing program as specified herein to determine to the extent possible the presence or absence of archeological resources in areas of project soil disturbance and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required to address archeological discoveries or the assessed potential for archeological discoveries, pursuant to this measure.

Archeological Testing Plan. The project archeologist shall consult with the ERO reasonably prior to the commencement of any project-related soils disturbing activities to determine the appropriate scope of archeological testing. The archeological testing program shall be conducted in accordance with an approved Archeological Testing Plan, prepared by the project archeologist consistent with the approved scope of work. The Archeological Testing Plan shall be submitted first and directly to the ERO for review and comment and shall be considered a draft subject to revision until final approval by the ERO. Project-related soils disturbing activities shall not commence until the testing plan has been approved and any testing scope to occur in advance of construction has been completed. The project archeologist shall implement the testing as specified in the approved Archeological Testing Plan prior to and/or during construction.

The Archeological Testing Plan shall include the following:

- **Project Description:** Description of all anticipated soil disturbing activities, with locations and depths of disturbance, including foundation and utility demolition, hazardous soils remediation, site grading, shoring excavations, piles or soil improvements, and foundation, elevator, car stacker, utility and landscaping excavations, with project plans and profiles, as needed, to illustrate the locations of anticipated soil disturbance.
- **Site Specific Environmental and Cultural Context:** Pre-contact and historic environmental and cultural setting of the project site as pertinent to potential Native American use and historic period development, any available information pertaining to past soil disturbance; soils information, such as stratigraphic and water table data from prior geotechnical testing. As appropriate based on the scale and scope of the project, the Archeological Testing Plan should include historic maps as a basis for predicting resource types that might be encountered and their potential locations. An overlay of the project site on the city's prehistoric sensitivity model mapping should be included, as should the locations of all known archeological sites within 0.25 mile of the project site.
- **Brief Research Design:** Scientific/historical research questions applicable to the expected resource(s), what data classes potential resources may be expected to possess, and how the expected data classes would address the applicable research questions.
- **Anticipated Resources or Resource Types:** Likely resources that might be encountered and at what locations and depths, based on known resources in the vicinity, the site's predevelopment setting and development history, and the anticipated depth and extent of project soil disturbances.
- **Proposed Scope of Archeological Testing and Rationale:** Testing methods to be used (e.g., coring, mechanical trenching, manual excavation, or combination of methods); locations and depths of testing in relation to anticipated project soil disturbance; strata to be investigated; any uncertainties on stratigraphy that would affect locations or depths of tests and might require archeological monitoring of construction excavations subsequent to testing.
- **Resource Documentation and Significance Assessment Procedures:** ERO and Native American consultation requirements upon making a discovery; pre-data recovery assessment process, burial treatment procedures, and reporting and curation requirements, consistent with the specifications of Mitigation Measure M-CR-2a.

Archeological Testing Results Memo. Irrespective of whether archeological resources are discovered, the project archeologist shall submit a written summary of the findings to the ERO at the completion of the archeological testing program. The findings report/memo shall describe each resource, provide an initial assessment of the integrity and significance of encountered archeological deposits encountered during testing, and provide recommendations for subsequent treatment of any resources encountered.

Resource Evaluation and Treatment Determination. Upon discovery of a suspected archeological resource during construction or archeological testing, Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations shall be implemented as specified in that measure.

Additional Applicable Measures. If a significant archeological resource is identified, and data recovery is required under Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations, the following additional measures identified in the Mitigation Measure M-CR-2a shall be implemented as specified in that measure:

- Archeological Data Recovery Program
- Treatment of Human Remains and Funerary Objects (as applicable)
- Coordination of Archeological Data Recovery Investigations
- Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable)
- Archeological Resources Report
- Curation

Mitigation Measure M-CR-2d. Treatment of Submerged and Deeply Buried Resources.

This measure applies to projects that would include subgrade excavation to depths that would penetrate to native soil or below Young Bay Mud, or entail the use of piles, soil improvements or other deep foundations in landfill areas within former creeks, ponds, bay marshes or waters of the bay that may be sensitive for submerged or buried historical or Native American archeological resources; and shall be implemented in the event of the discovery of a submerged or deeply buried resource during archeological testing, archeological monitoring, or soil-disturbing construction activities that occur when an archeologist is not present.

In addition to the measures detailed below, for any project during which a significant archeological resource is identified, a preservation or treatment determination shall be made consistent with the provisions of Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance. If data recovery is required, the following additional measures identified in measure M-CR-2a shall be implemented, as specified in that measure:

- Archeological Data Recovery Program
- Treatment of Human Remains and Funerary Objects (as applicable)
- Coordination of Archeological Data Recovery Investigations
- Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable)
- Archeological Resources Report
- Curation

The following additional measures shall be undertaken upon discovery of a potentially significant deeply buried or submerged resource to minimize significant effects from deep project excavations, soil improvements, pile construction, or construction of other deep foundation systems, in cases where the environmental review officer (ERO) has determined through consultation with the project sponsor, and with tribal representatives as applicable, that preservation –in place—the preferred mitigation— is not a feasible or effective option.

Submerged or Buried Resource Treatment Determination. If the resource cannot feasibly or adequately be preserved in place, documentation and/or archeological data recovery shall be conducted, as described in Mitigation Measure M-CR-2a. However, by definition, submerged or deeply buried resources sometimes are located deeper than the maximum anticipated depth of project excavations, such that the resource would not be exposed for investigation, and/or under water or may otherwise pose substantial access, safety or other logistical constraints for data recovery; or the cost of providing archeological access to the resource may demonstrably be prohibitive.

In circumstances where the constraints identified above limit physical access for documentation and data recovery, the ERO, project sponsor, project archeologist, and tribal representative (for Native American archeological resources), shall consult to explore alternative documentation and treatment options to be implemented in concert with any feasible archeological data recovery. The appropriate treatment elements, which would be expected to vary with the type of resource and the circumstances of discovery, shall be identified by the ERO based on the results of consultation from among the treatment measures listed below. Additional treatment options may be developed and agreed upon through consultation if it can be demonstrated that they would be equally or more effective in recovering or amplifying the value of the data recovered from physical investigation of the affected resources by addressing applicable archeological research questions and in disseminating data and meaningfully interpreting the resource to the public.

Each treatment option below, or a combination of the treatment measures, in concert with any feasible standard data recovery methods applied as described above, would be effective in mitigating significant impacts to submerged and buried resources. The ERO, in consultation with the project archeologist and project sponsor, shall identify which of these measures that, individually or in combination, will be applicable and effective in recovering sufficient data, enhancing the research value of the data recovery, meaningfully interpreting the resource to the public, or otherwise effectively mitigating the loss of data or associations that will result from project construction. Multiple treatment measures shall be adopted in combination, as needed to adequately mitigate data loss and, as applicable, impacts to tribal cultural values, as determined in consultation with the ERO and, as applicable, tribal representatives.

The project archeologist shall document the results of the treatment program consultation with respect to the agreed upon scope of treatment in a treatment program memo, for ERO review and approval. Upon approval by the ERO, the project sponsor shall ensure that treatment program is implemented prior to and during construction, as applicable. Reporting, interpretive, curation and review requirements are the same as delineated under the other cultural resources mitigation measures that

are applicable to the project, as noted above. The project sponsor shall be responsible for ensuring the implementation of all applicable mitigation measures, as identified in the treatment program memo.

Treatment Options

- Remote Archeological Documentation. Where a historic feature cannot be recovered or adequately accessed in place by the archeologist due to size, bulk or inaccessibility, the archeologist shall conduct all feasible remote documentation methods, such as 3-D photography using a remote access device, remote sensing (e.g., ground penetrating radar with a low range (150 or 200 MHz) antenna), or other appropriate technologies and methods, to document the resource and its context. The project sponsor and contractor shall support remote archeological documentation as needed, by assisting with equipment access (e.g., drone, lights and camera or laser scanner mounted on backhoe); providing personnel qualified to enter the excavation to facilitate remote documentation; and accommodating training of construction personnel by the project archeologist so that they can assist in measuring or photographing the resource from inside the excavation in cases when the archeologist cannot enter.
- Modification of Contractor's Excavation Methods. At the request of the ERO, the project sponsor shall consult with the project archeologist and the ERO to identify potential modifications to the contractor's excavation and shoring methods to facilitate data recovery to prevent damage to the resource before it has been documented, to assist in exposure and facilitate observation and documentation, and to assist in data recovery. Examples include improved dewatering during excavation, use of a smaller excavator bucket or toothless bucket, providing a location where spoils can be spread out and examined by the archeologist prior to being offhauled, and phasing or benching of deep excavations to facilitate observation and/or deeper archeological trenching.
- Data Recovery through Open Excavation. If a project will include mass excavation to the depth of the buried/submerged deposit, archeological data recovery shall include manual (preferred) or controlled mechanical sampling of the deposit. If project construction would not include mass excavation to the depth of the deposit but would impact the deposit through deep foundation systems or soil improvements, the ERO and the project sponsor shall consult to consider whether there are feasible means of providing direct archeological access to the deposit (e.g., excavation of portion of the site that overlies the deposit to the subject depth so that a sample can be recovered). The feasibility consideration shall include an estimate of the project cost of excavating to the necessary depth and of providing shoring and dewatering sufficient to allow archeological access to the deposit for manual or mechanical recovery.
- Mechanical Recovery. If site circumstances limit access by archeologists to the find, the ERO, project archeologist, and project sponsor shall consult on the feasibility of mechanically removing the feature/ deposit or portion of it intact for off-site documentation and analysis, preservation, and interpretive use. The consultation above shall include consideration as to whether such recovery is logistically feasible and can be accomplished without major data loss. The specific means and methods and the type and size of the sample shall be identified, and the recovery shall be

implemented as determined feasible by the ERO. The project sponsor shall assist with mechanical recovery and transport and curation of recovered materials and shall provide for an appropriate and secure off-site location for archeological documentation and storage as needed.

- Salvage of Historic Materials. Samples or sections of historical features that cannot be preserved in place (e.g., structural members of piers or wharves, sections of wooden sea wall, rail alignments, or historic utility or paving features of particular data value or interpretive interest) shall be tested for contamination and, if not contaminated, shall be salvaged for interpretive use or other reuse, such as display of a reconstructed resource; use of timbers or planks for site furniture and signage structures; installation in publicly accessible open spaces; or other uses of public interest. Historic wood and other salvageable historic structural material not used for interpretation shall be recovered for reuse, consistent with the San Francisco Ordinance No. 27-06, which requires recycling or reuse of all construction and demolition debris material removed from a project. If the project has the potential to encounter such features, the project sponsor shall plan in advance for reuse of salvaged historic materials to the greatest extent feasible, including identification of a location for interim storage and identification of potential users and reuses.
- Data Recovery Using Geoarcheological Cores. If it is deemed infeasible to expose a significant deposit resource for archeological data recovery, geoarcheological coring of the identified deposit shall be conducted at horizontal grid intervals of no greater than 15 feet within areas that will be impacted by project construction. The maximum feasible core diameter shall be used for data recovery coring. The objective of coring is to obtain a minimum of a five percent sample of the estimated total volume of the resource within areas that will be impacted by project construction. However, due to the small size of each core, this method alone generally cannot recover a 5 percent sample volume or a sufficient quantity of data to adequately characterize the range of activities that took place at the site. For this reason, if the coring sample constitutes less than five percent of the estimated total volume of the archeological deposit that will be directly impacted by project construction, the project sponsor may elect implementation of one or more of the following additional compensatory measures to amplify the value of the recovered data.
- Compensatory Treatment Measures:
 - *Scientific Analysis of Data from Comparable Archeological Sites/ “Orphaned Collections.”* The ERO and the project archeologist shall consult to identify a known archeological site or historical feature, or curated collections or samples recovered during prior investigation of similar sites or features are available for further analysis; and for which site-specific or comparative analyses would be expected to provide data relevant to the interpretation or context reconstruction for the affected site. Examples would include reanalysis or comparative analysis of artifacts or archival records; faunal or paleobotanical analyses; dating; isotopes studies; or such other relevant studies based on the research design developed for the affected site and on data sets available from the impacted resource and comparative collections. The scope of analyses shall

be determined by the ERO based on consultation with the project archeologist, the project sponsor and, for sites of Native American origin Native American representatives.

- *Additional Off-Site Data Collection and/or Analysis for Historical and Paleoenvironmental Reconstruction.* The ERO and project archeologist shall identify existing geoaerchological data and geotechnical coring records on file with the city; and/or cores extracted and preserved during prior geotechnical or geoaerchological investigations that could contribute to reconstruction of the environmental setting in the vicinity of the identified resource, to enhance the historical and scientific value of recovered data by providing additional data about Native American archeological environmental setting and stratigraphic sensitivity; and/or provide information pertinent to the public interpretation of the significant resource. Relevant data may also be obtained through geoaerchological coring at accessible sites identified by the ERO through consultation with San Francisco public agencies and private project sponsors.

Mitigation Measure M-TCR-1: Tribal Notification and Consultation.

(See Section 4.3, Tribal Cultural Resources)

Conclusion

With implementation of the applicable mitigation measure(s) above, identified through the preliminary archeological review process, the impacts of the proposed action on archeological resources would be ***less than significant with mitigation***. Refer to Section 4.3, Tribal Cultural Resources, for an evaluation of the proposed action's impacts on tribal cultural resources.

Impact CR-3: The proposed action has the potential to disturb human remains, including those interred outside of formal cemeteries. (*Less than Significant with Mitigation*)

As discussed above, if human remains are encountered during soil disturbance, the treatment of human remains must comply with the provisions of state laws and codes, which identify protocols to be followed upon discovery of human remains (Public Resources Code section 5097.98 and Health and Safety Code section 7050.5). Public Resources Code section 5097.98 specifically includes provisions for the treatment of Native American human remains.

Future development consistent with the proposed action has the potential to result in impacts on archeological resources that may include human remains and disturbance of human remains as the result of future development consistent with the housing element update would be a significant impact. For locations assessed as archeologically sensitive and where future project soil disturbance would be assessed through the preliminary archeological review process described under Impact CR-2, the potential for impacts on human remains in an archeological context would be addressed through implementation of the provisions of mitigation measures determined applicable. Human remains of Native American origin are also presumed to be tribal cultural resources and the potential for impacts on human remains as tribal cultural resources would be addressed through implementation, as applicable, of Mitigation Measure M-TCR-1, see Section 4.3, Tribal Cultural Resources. Based on the conclusions of preliminary archeological review described under Impact CR-2 and the

outcome of tribal cultural resources notification and consultation, as described in Section 4.3, Tribal Cultural Resources, the department would identify which, if any, of the following mitigation measures would be required to mitigate the potential for impacts on human remains related to the construction of future development projects consistent with the housing element update: Mitigation Measure M-CR-2a and, as applicable, Mitigation Measure M-CR-2b; Mitigation Measure M-CR-2c; Mitigation Measure M-CR-2d; and, as applicable, Mitigation Measure M-TCR-1. These measures include procedures for the protection and treatment of human remains. In addition, the state laws described above and under Impact CR-2 would apply to future development consistent with the proposed action. The mitigation measures, together with regulatory compliance, would reduce the significant impact of the proposed action on human remains to *less than significant with mitigation*.

Cumulative Impacts

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

As discussed in Impact NO-3 in Section 4.5, Noise and Vibration, because of the highly localized nature of vibration from heavy equipment, construction vibration from development located in the same vicinity would generally not combine to further increase vibration levels. Thus, vibration resulting from construction of future development consistent with the proposed action would not combine with vibration from cumulative projects; cumulative vibration impacts are not discussed further.

Impact C-CR-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to historical resources, as defined in CEQA Guidelines section 150.64.5. (*Significant and Unavoidable with Mitigation*)

The Downtown Congestion Pricing project does not propose construction or excavation. Thus, the cumulative projects, with the exception of the Downtown Congestion Pricing project, would involve changes to San Francisco's built environment such as demolition and new construction. For example, future development consistent with the Port of San Francisco Waterfront Plan Update may result in additional development on select Port-owned parcels that lie adjacent to San Francisco's northeast waterfront, generally located between Fort Mason and Islais Creek. Port of San Francisco property includes the national register-listed Port of San Francisco Embarcadero Historic District and is located in the vicinity of other historic register-listed or -eligible built-environment resources within adjacent neighborhoods. Although future development consistent with the

Waterfront Plan Update is not proposed to replace any previously identified built-environment historic resources, it is possible that future development consistent with the Waterfront Plan Update could result in construction impacts to adjacent or nearby historic resources, including the Port of San Francisco Embarcadero Historic District. BART's Second Transbay Tube Project and Increased Caltrain Service and Pennsylvania Avenue Extension could demolish, substantially alter, or degrade the historic setting of significant built-environment resources. The locations of these projects are not currently known apart from an understanding that they would be constructed in the Financial District/South Beach, Mission Bay, and/or other neighborhoods along San Francisco's eastern waterfront, so that it is not currently known which specific resources could be affected.

Because future projects consistent with the proposed action could occur within the same neighborhoods of San Francisco as the cumulative projects described above, it is possible that future projects implementing the proposed action could act in tandem with the cumulative projects to materially impair the significance of the same historic resources. For instance, future projects associated with the housing element update, as well as one or more of the cumulative projects, could be constructed within the same historic district (either currently known or identified in the future), or within the vicinity of the same individual resource or historic district. In such a scenario, it is possible for the projects to demolish multiple district contributors, remove or change character-defining features of the affected resource or district's historic setting, or cause construction-related damage. In such a scenario, the multiple projects could materially impair the significance of the individual resource or district.

While possible, a cumulative impact resulting from future infrastructure repair, maintenance, and improvement projects is considered low as the majority of such projects have limited potential to alter the character-defining features of built-environment historic resources' settings. This is because for most of these projects any discernible and permanent physical changes in the built environment these projects may introduce would resemble ongoing activity types that are generally consistent with similar activities that have occurred in San Francisco over decades. As such, any physical change to the built environment they cause represents a continuation of change that typically does not compromise setting qualities that characterize built-environment historic resources. For the reasons described above, future development consistent with the proposed action could act in tandem with cumulative projects and could materially impair the significance of individual historic resources and historic districts through demolition, substantial alteration, and changes in a resources' setting that affect the same resource. The proposed action's contribution would be cumulatively considerable because the incremental effects of associated housing construction projects would add substantially to the effects of the cumulative projects. Therefore, there would be a significant cumulative impact to built-environment historic resources.

Although Mitigation Measures M-CR-1a through M-CR-1l presented above would reduce the proposed action's contribution, these measures may not reduce the contribution to less than significant. Thus, even with incorporation of mitigation measures, the potential for individual historic resource and historic district impacts would remain and the proposed action's contribution to any significant cumulative impacts to built-environment historic resources would be cumulatively considerable. The cumulative impact on built-environment historic resources would be *significant and unavoidable with mitigation*.

Impact C-CR-2: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact related to archeological resources and human remains. (*Less than Significant with Mitigation*)

For archeological resources, significant cumulative impacts could result if more than one project would affect the same archeological resource. The Downtown Congestion Pricing project would not have the potential for effects to the same archeological resources as development consistent with the proposed action because this project does not propose construction or excavation. Future infrastructure repair, maintenance, and improvement projects that entail ground disturbance have the potential to impact known or as of yet unidentified archeological resources that may also be impacted by future projects under the proposed action. While possible, a cumulative impact resulting from future infrastructure repair, maintenance, and improvement projects is considered low as the majority of such projects require limited ground-disturbance and often occur within previously disturbed portions of existing city streets, which limits their ability to impact a significant archeological resource that would also be impacted by future development projects resulting from the proposed action. However, future development consistent with the proposed action could occur in the same areas affected by the Increased Caltrain Service and Pennsylvania Avenue Extension, future development consistent with the Port of San Francisco's Waterfront Plan Update, and BART's Second Transbay Tube Project. Development consistent with the proposed action combined with these three cumulative projects has the potential to affect the same significant archeological resources. Therefore, future development consistent with the proposed action, in combination with other projects in the area, could disturb or destroy known or as yet unidentified archeological resources. This could result in a significant cumulative impact related to the loss of significant historical, scientific, and cultural information about California, the region, and San Francisco. Therefore, there would be a significant cumulative impact to archeological resources.

As described under Impact CR-2, above, construction activities associated with future development consistent with the housing element update could result in ground-disturbing activities in areas identified as having moderate to very high sensitivity for archeological resources, and therefore has the potential to make a cumulatively considerable contribution to the significant cumulative impact. Based on the conclusions of preliminary archeological review described under Impact CR-2, the department would identify which, if any, of the following mitigation measures would be required to mitigate the potential archeological impacts of construction of future development consistent with the housing element update: Mitigation Measure M-CR-2a and, as applicable, Mitigation Measure M-CR-2b; Mitigation Measure M-CR-2c; and Mitigation Measure M-CR-2d. In addition, if during preliminary archeological review the department identifies a high potential for a project to result in impacts to a Native American archeological resource, the department would notify Native American tribal representatives of that finding as required by Mitigation Measure M-TCR-1: Tribal Cultural Resources Notification and Consultation in Section 4.3, Tribal Cultural Resources. Implementation of the applicable mitigation measures would reduce the proposed action's contribution to the significant cumulative impact to a less-than-significant level. Among other provisions, these measures require coordination of archeological investigations and analyses of projects that both affect the same resource to maximize the efficacy of archeological data recovery in preserving and interpreting the information potential of the resource. Thus, with incorporation of mitigation measures, the proposed action's contribution to any significant cumulative archeological resource impacts would not be cumulatively considerable

and the impact would be less than significant. The cumulative impact on archeological resources would be *less than significant with mitigation*.

Significant cumulative impacts could result if more than one project would affect the same human remains in an archeological context. For reasons similar to those described above for archeological resources, future development consistent with the proposed action could occur in the same areas affected by the Increased Caltrain Service and Pennsylvania Avenue Extension, future development consistent with the Port of San Francisco's Waterfront Plan Update, and BART's Second Transbay Tube Project. Development consistent with the proposed action combined with these three cumulative projects has the potential to affect the same human remains in an archeological context. Therefore, future development consistent with the proposed action, in combination with other projects in the area, could disturb or destroy known or as yet unidentified human remains in an archeological context. This would be a significant cumulative impact to human remains in an archeological context.

As described under Impact CR-2, above, construction activities associated with future development consistent with the housing element update could result in ground-disturbing activities in areas identified as having moderate to very high sensitivity for human remains in an archeological context, and therefore has the potential to make a cumulatively considerable contribution to the significant cumulative impact. As described above, construction activities associated with future development consistent with the proposed action combined with the Caltrain Service and Pennsylvania Avenue Extension, Waterfront Plan Update, and BART's Second Transbay Tube cumulative projects has the potential to affect human remains in an archeological context. Based on the conclusions of preliminary archeological review described under Impact CR-2 and the outcome of tribal cultural resources notification and consultation, as described in Section 4.3, Tribal Cultural Resources, the department would identify which, if any, of the following mitigation measures would be required to mitigate the potential for impacts on human remains related to the construction of future development projects consistent with the housing element update: Mitigation Measure M-CR-2a and, as applicable, Mitigation Measure M-CR-2b; Mitigation Measure M-CR-2c; Mitigation Measure M-CR-2d; and, as applicable, Mitigation Measure M-TCR-1. Each of these measures includes procedures for the protection and treatment of human remains. Thus, with the state laws described above under Impact CR-3 and incorporation of mitigation measures, the proposed action's contribution to any significant cumulative human remains impacts would not be cumulatively considerable and the impact would be less than significant. The cumulative impact on human remains would be *less than significant with mitigation*.

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4.3 Tribal Cultural Resources

This section of the environmental impact report (EIR) analyzes potential tribal cultural resource impacts that could occur as a result of the proposed action and cumulative conditions. These impacts would occur as a result of future actions that would implement the goals, policies, and actions of the proposed housing element update (i.e., future development consistent with the proposed action). This section discusses the environmental setting, regulatory framework, approach to analysis, environmental impacts, and mitigation measures for tribal cultural resources.

Under CEQA section 21074, a tribal cultural resource is a site, feature, place, cultural landscape, or sacred place or object that is of cultural value to a California Native American tribe. Tribal cultural resources generally include physical manifestations or characteristics—such as a specific object, place, or geographic landmark—but generally are tribally valued for intangible qualities that represent or honor the tribe’s spiritual life, traditions, and history. A project or program that would result in a substantial adverse change in a tribal cultural resource would have a significant impact on the environment. This section evaluates the potential for the proposed action to result in significant impacts on tribal cultural resources.

As discussed below, CEQA sections 21080.3.1 and 21080.3.2 require CEQA lead agencies to provide opportunities for California Native American groups that are traditionally and culturally affiliated with a project area to provide input regarding the identification and treatment of tribal cultural resources in the area. Based on discussions in 2015 between the department and local tribes (see discussion under “Planning Department Tribal Consultation Policy and Practices,” below), the department determined that all archeological sites and human remains of Native American origin in San Francisco are potential tribal cultural resources. Native American consultation for the housing element update was conducted in 2021. The results of this consultation are discussed in this section.

Environmental Setting¹

NATIVE AMERICAN PEOPLE AND CULTURE OF SAN FRANCISCO²

At the time of the arrival of Europeans in central California, in the 18th century, Ohlone Native Americans occupied an extensive territory that encompassed the San Francisco Peninsula, extended southward to Big Sur and San Juan Bautista, and included inland areas along both sides of Carquinez Strait. The territory also extended eastward, beyond the East Bay hills to Walnut Creek and Livermore.³ The Ohlone were speakers of the Penutian language (also referred to as Costanoan or Ohlone), which comprised six languages or dialect clusters: Karkin, Mutsun, Awaswas, Rumsen, Chalon, and San Francisco Bay Costanoan, which comprised three dialects—

¹ For this topic, *existing conditions* is defined as the conditions in 2021, the year for which the most recent applicable data are available.

² This overview was prepared in consultation with Ohlone Native American representatives.

³ Levy, R., Costanoan, in California, *Handbook of the Indians of North America*, volume 8, R. Heizer (ed.), Smithsonian Institution, Washington, D.C., 1978, pp. 485–486.

Ramaytush, Tamien, and Chochenyo⁴ — each the primary dialect of Ohlone peoples in different geographic areas of the bay region.⁵ Anthropologists hypothesize, based on inter-familial relationships reconstructed from mission records, that the Ohlone within each geographic area were loosely politically organized. Whether such distinctions were culturally meaningful to the Ohlone people who spoke those dialects and the exact geographic “boundaries” between linguistic groups are uncertain. Although, for purposes of this ethnography, the population of each linguistic sub-area is described as a “tribe,” scholars⁶ caution that “[s]uch a linguistic group approach can create a misleading and overly simplistic view of the complex mosaic of cultural variation in the aboriginal San Francisco Bay Area.”

On the basis of linguistic studies,⁷ the greater San Francisco Peninsula, including the area now occupied by San Francisco and most of San Mateo County, was home to the *Ramaytush* Ohlone tribe. The population of *Ramaytush* Ohlone speakers in the 1700s has been estimated at approximately 1,400,⁸ 1,500,⁹ and 2,000.¹⁰ The boundaries of today’s San Francisco generally correspond with the territory of the *Yelamu*, an independent tribe or tribal community of the *Ramaytush* Ohlone peoples,¹¹ which, according to estimates, included approximately 140 individuals at the time of the Spanish arrival in San Francisco in 1776.¹² Mission records suggest that the *Yelamu*, like other Ohlone tribes, were composed of a number of smaller bands, with each made up of several 10- to 15-person households that were associated with a village or a cluster of villages within the tribe’s territory.

⁴ Golla, Victor, *California Indian Languages*, University of California Press, Berkeley, 2011.

⁵ A Native American representative notes that it is likely that these dialects and the “boundaries” among them undoubtedly changed over time.

⁶ Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995, p. 13.

⁷ Levy, R., Costanoan, in California, *Handbook of the Indians of North America*, volume 8, R. Heizer (ed.). Smithsonian Institution, Washington, D.C., 1978, p. 485; Levy, R., *Costanoan Internal Relationships*, manuscript prepared for the Archaeological Research Facility, Department of Anthropology, University of California, Berkeley by Richard Levy, Department of Anthropology, University of Kentucky, 1976, Figure 1, p. 57.

⁸ Levy, R., Costanoan, in California, *Handbook of the Indians of North America*, volume 8, R. Heizer (ed.). Smithsonian Institution, Washington, D.C., 1978.

⁹ Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, Table 4, p. 64.

¹⁰ Bocek, B., Subsistence, Settlement, and Tribelet Territories on the Eastern San Francisco Peninsula, in *24th Proceedings of the Annual Meeting of the Society for California Archaeology*, 5:269–297, 1992, <https://scahome.org/publications/proceedings/Proceedings.05Bocek.pdf>.

¹¹ Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995, Map 4, p. 228.

¹² Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, Table 4, p. 64.

Locational data and familial relationships among persons listed in Mission San Francisco de Asís (Mission Dolores) records suggest¹³ that there were three *Yelamu* bands in San Francisco, each associated with a certain village or villages:

Sitlintac and Chutchui, only a mile or two apart in the valley of Mission Creek, seem to have been *Yelamu* sites used at different times of year by one band of families. Another *Yelamu* band seems to have used the village sites of Amuctac and Tubsinte in the Visitation Valley area in the same way. Petlenuc, perhaps near the site of the Spanish Presidio compound, seems to have been [the village of] a third small band.

Other scholars argue, based on proximity to other *Yelamu* villages along the bay shoreline, that the use of particular villages was not seasonal and that movement by family and village members between their home village and other villages within their tribal territory appears to have been quite fluid.¹⁴

Archeological evidence indicates that San Francisco has been occupied for at least 7,600 years and that the locations and number of Native American settlements changed over thousands of years of human habitation. At least 40 sites of Native American origin have been identified in San Francisco through archeological testing and/or archival information; about 25 of these have been investigated to some extent by archeologists. There are clusters of archeologically recorded Native American occupation sites in the present-day neighborhoods of the Inner Mission District, around the Presidio, and in Visitation Valley. Some of these may correlate with the ethnographic-period villages referenced above. Three archeological sites in the general vicinity of Mission Dolores have yielded artifacts or features (e.g., 18th-century glass beads) that evidence contact-period occupation; whether any of these represents ethnographically identified village sites, such as *Chutchui* or *Sitlintac*, or a possibly a neophyte (mission convert) settlement, is uncertain. There are also many recorded Native American archeological sites in the South of Market neighborhood, near the historic period (post 1769) shoreline¹⁵ of Mission Bay and its marshes. Sites near the past bay shoreline that have been investigated indicate widespread Native American occupation, particularly near the coastal and bay shoreline portions of *Yelamu* territory, well before the arrival of the Spanish in San Francisco.

Interpretation of Mission Dolores records indicates that *Yelamu* bands often were interlinked by marriage within the triblet. The *Yelamu* also intermarried with people who lived in the villages of other tribes, generally one or two tribal territories distant from their own, including tribes that resided north and east of San Francisco¹⁶ as well as tribes immediately to the south along the San Francisco Peninsula.¹⁷

¹³ Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995, p. 260.

¹⁴ Personal communication, Jonathan Cordero, Founder and Executive Director of the Association of Ramaytush Ohlone, to Sally Morgan, San Francisco Planning Department staff, San Francisco, CA, September 28, 2021.

¹⁵ Landfill along the shoreline, starting around 1850 and continuing into the 1960s, substantially changed the San Francisco shoreline by moving it well out into what were formerly bay waters.

¹⁶ Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995, p. 62.

¹⁷ Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995, p. 79; Cordero, Jonathan, Native Persistence: Marriage, Social Structure, Political Leadership, and Intertribal Relations at Mission Dolores, 1777–1800, in *Journal of California and Great Basin Anthropology*, volume 35, issue 1, p. 140, 2015.

Within the tribe, bands or family households assisted with planning for resource collection and management among bands and possibly more broadly. Most of the year, households in a band might share a single large village site, but at other times, households might disperse to satellite villages to optimize resource extraction during seasonal changes or for other reasons.¹⁸ There appears to have been substantial fluidity, both in the population of a given village and in village locations. For instance, Spanish Franciscan missionary Francisco Palou wrote about the peninsula's San Andreas Valley in 1774,

The first expedition that passed here did not give it a name on account of not finding any villages, while now, in the short stretch we have traveled we have found five large ones. From this it is inferred that the country is well populated and that the inhabitants move their villages readily from place to place.¹⁹

Like other Ohlone tribes, the *Yelamu* were hunter-gatherers who acquired and used a wide variety of plant and animal resources, including many varieties of game, fish, and shellfish and many species of plants. The primary foods collected and used most likely varied seasonally and from year to year and over time, depending on the food sources available in the environmental setting of a particular village or territory, available labor, local preferences, and annual resource productivity. Where desirable species of oak were present, acorns were a plant-based food staple for many central California groups, including most *Ramaytush* groups. A variety of seeds, berries, roots, nuts, fruits, fish, mammals, reptiles, and insects were also consumed.²⁰ To improve and maintain seasonal resource sustainability, the Ohlone actively managed the landscape by clearing through controlled burning, tilling, planting, irrigating, weeding, and pruning to improve browsing conditions for game animals and habitats for desirable plants. Controlled burning not only helped replenish the soil and manage plant resources but also often delineated territories. Individual families and bands might be associated with particular burn zones and resource collection areas.²¹ The intimacy and depth of the Ohlone's knowledge of plants from both the land and the sea (e.g., for food, medicinal uses, and other uses) is detailed in anthropological notes from²²

For Native American groups that had access to the bay shoreline or ocean coast, which seems to have been the case throughout San Francisco, shellfish were an important dietary staple. Shellfish were collected from rocks and tidepools at low tide or harvested from sand and mud flats. The importance of shellfish to San Francisco Ohlone is reflected not only in the fact that shellfish shells are a major constituent of most archeological deposits

¹⁸ Levy, R., Costanoan, in California, *Handbook of the Indians of North America*, volume 8, R. Heizer (ed.), Smithsonian Institution, Washington, D.C., 1978.

¹⁹ Bolton, H.E. (editor and translator), *Historical Memoirs of New California*, by Fray Francisco Palóu, O.F.M., translated into English from the manuscript in the archives of Mexico, University of California Press, Berkeley, 1926, p. 272.

²⁰ Levy, R., Costanoan, in California, *Handbook of the Indians of North America*, volume 8, R. Heizer (ed.), Smithsonian Institution, Washington, D.C., 1978, pp. 491–493; Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995, p. 20; Milliken, R.T., *An Ethnohistory of the Indian People of the San Francisco Bay Area from 1770 to 1810*, University of California Press, Berkeley, 1991, p. 31; Kroeber, A.L., *Handbook of the Indians of California*, in *Bureau of American Ethnology Bulletin 78*, Washington, D.C., 1925, p. 467.

²¹ Lightfoot, K.G., O. Parrish, L.M. Panich, T.D. Schneider, and K.E. Soluri, *California Indians and Their Environment: An Introduction*, University of California Press, Berkeley, 2009, pp. 82–83.

²² Harrington, J.P., *John Peabody Harrington Papers: Costanoan (part 3), 1921–1939*, Smithsonian Museum of Natural History, Washington, D.C., <https://learninglab.si.edu/resources/view/216584>.

in San Francisco, including one site dating to 7,900 years ago,²³ but also in the use of *Olivella* and abalone shells as raw material for the manufacture of currency, ceremonial ornaments, trade goods, and grave offerings.

Archeological findings from sites around Mission Bay and elsewhere in San Francisco,²⁴ as well as ethnographic studies, document the rich inventory of animal resources from the sea and shoreline marshes harvested by the Ohlone, along with resources obtained from creeks and estuaries, freshwater ponds, and marshes, which were scattered around San Francisco. The methods used to obtain fish, which ranged in size from anchovies to sturgeons, were adapted to the size and habitat. Fiber nets with drilled or grooved stone weights were cast from shore or from tule boats to capture schooling fish, while stone, shell, or bone hooks on fiber lines were used for larger fish. In still waters, plant-derived toxins from California buckeye nuts were used to stun fish temporarily for capture. Sturgeon or large salmon were harpooned with spears with finely fashioned stone tips. Fish weirs facilitated mass capture of shallow-water marsh fish, such as bat rays, at low tide. Stranded whales were used both for meat and for their bones. Harpoons also were used to hunt sea otters and other sea mammals, which provided meat and also furs that were prized for their warmth or valued as trade goods. The Ohlone used nets, bow and arrow, and spear and atlatl to hunt waterfowl and a wide range of other animals that frequented the marshes and the shore; these included tule elk, bear, deer, and rabbits. The Ohlone made use of not only the meat provided by these animals but also of their sinews, bones, furs, and feathers. Animal bones were used in the manufacture of a plethora of items, including harpoon and spear tips, whistles, hide scrapers, drills, gaming pieces, and ornaments.

Ohlone also made and used a wide range of basketry items, a variety of chipped and ground stone tools, bone tools, and shell beads and ornaments, primarily from locally available materials, with the exception of obsidian. Obsidian for stone tools was obtained through a trade network that stretched northward to Santa Rosa and Napa and eastward over the Sierra Nevada to the Owens Valley. Ohlone tribes engaged in trade both locally and throughout California and beyond. Milliken notes, “The *Yelamu* tribe probably played a key role in regional trade, moving obsidian and other goods from the north and east across the bay and down the [San Francisco] Peninsula, while bringing coastal shells to the East Bay.”²⁵ The primary trading partners of the Ohlone were the Coast Miwok, Pomo, Yokuts, and Wappo tribes. Exports included mussels, salt, abalone shells, dried abalone meat, *Olivella* shells, and, very likely, pelts from sea otters.²⁶ The Ohlone imported piñon nuts, which were obtained from the Yokuts,²⁷ as well as locally unavailable lithic materials.

²³ Personal communication from Jay Rehor, AECOM to Sally Morgan, San Francisco Planning Department, regarding most recent radiocarbon dates for Native American archeological site SFR-220, a submerged archeological deposit near the mouth of Mission Creek.

²⁴ For example, among many others, AECOM, archeological site record for SFR-220, a submerged deposit, 7,900 years old. Confidential record on file in California Historical Resources Information System, Sonoma State University, 2020; Byrd, B. J. Berg, and J. Meyer, *Archaeological Data Recovery at the Yerba Buena Site (CA-SFR-114) for the Moscone Center Expansion Project, San Francisco*, 2018. On file under Case No. 2013.0154E, San Francisco Planning Department.

²⁵ Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995, p. 62.

²⁶ Levy, R., Costanoan, in California, *Handbook of the Indians of North America*, volume 8, R. Heizer (ed.), Smithsonian Institution, Washington, D.C., 1978, p. 488.

²⁷ Davis, J.T., Trade Routes and Economic Exchange Among the Indians of California, University of California Archaeological Survey Reports 54, Berkeley, CA, reprinted in *Aboriginal California: Three Studies in Culture History*, R.F. Heizer (ed.), University of California Press Berkeley, 1961, p. 23.

Trade feasts called together tribal and tribelet neighbors for social and ceremonial gatherings. These trade feasts served to redistribute wealth and provided opportunities for groups to socialize, form alliances, and exchange trade goods across different regions.²⁸

Spanish colonization in the San Francisco Bay Area began with the establishment of several missions and associated presidios (military outposts) in the last quarter of the 18th century. Mission Dolores and the San Francisco Presidio, established in 1776, marked the initial non-native arrival and settlement in San Francisco. The purpose for establishing these outposts was to extend and enforce Spain's control over California, in large part by converting California Native Americans to Catholicism and enslaving them as a Spanish labor source. The subsequent, often forceable, recruitment of Native Americans into the mission system resulted in catastrophic social upheaval and demographic decline for the region's native Ohlone inhabitants. The *Yelamu*, like other Ohlone groups, were subjected to disruptions to traditional subsistence patterns and cultural practices, physical punishment, and new forms of labor discipline. Native people who had entered the mission system were generally prohibited from returning to their homes, except for occasional visits, which greatly hampered their ability to maintain traditional practices and ties to the community and land. A variety of factors contributed to high death rates at the mission, including the austere living and working conditions imposed by the Spanish and European diseases. More than a quarter of the native population of the San Francisco Bay Area died from the measles or related complications between March and May 1806.

According to Spanish records, the last Ohlone elder from the San Francisco Peninsula was baptized at Mission San Francisco in 1801.²⁹ Spanish sources report that Ohlone villages in San Francisco and the vicinity were vacant by this time or nearly so. Although some *Ramaytush* Ohlone had possibly fled to remote refuge sites or resided with more distant tribes, most apparently had either died or were residents at the missions at the start of the 19th century.³⁰ The Bay Area Ohlone population had decreased from 7,000 to 17,000 in 1770^{31, 32, 33} to fewer than 2,000 in 1832.³⁴

²⁸ Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995, pp. 21–24.

²⁹ Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, Table 4, p. 2.

³⁰ Levy, R., Costanoan, in California, *Handbook of the Indians of North America*, volume 8, R. Heizer (ed.), Smithsonian Institution, Washington, D.C., 1978, p. 506.

³¹ Kroeber, A.L., Handbook of the Indians of California, in *Bureau of American Ethnology Bulletin 78*, Washington, D.C., 1925, p. 464

³² Cook, Sherburne F., Population Trends among the California Mission Indians, University of California Publications, in *Ibero-America*, volume 17:1–48, Berkeley, CA, reprinted in 1976 as part five in *The Conflict between the California Indian and White Civilization*, University of California Press, Berkeley and Los Angeles, 1940; Cook, Sherburne F., The Indian versus the Spanish Mission, University of California Publications, in *Ibero-America*, volume 21:1–194, Berkeley, CA, reprinted in 1976 as part one in *The Conflict between the California Indian and White Civilization*, University of California Press, Berkeley and Los Angeles, 1943.

³³ Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, p. 65.

³⁴ Levy, R., Costanoan, in California, *Handbook of the Indians of North America*, volume 8, R. Heizer (ed.), Smithsonian Institution, Washington, D.C., 1978, p. 506.

Ohlone peoples were forced into the mission system at Mission Dolores as well as the San Carlos Borromeo, San Francisco de Asís, Santa Clara de Asís, Santa Cruz, and San José missions. Mission Dolores, on the San Francisco Peninsula, absorbed Ohlone peoples as well as other California indigenous tribal groups, including the Esselen, Yokuts, Miwok, Pomo, and Patwin. Although, in theory, Native American mission converts were to be trained in agricultural practices at the missions and then “granted” land and materials to establish their own farms, in practice, no such land grants to Ohlone converts occurred in San Francisco. By the time of secularization of the missions in 1834, a new class of Hispanic rancho landowners had arisen. The Native American survivors of the mission system, who had been deprived of the ability to pursue native subsistence practices on their own land, were exploited as labor for Hispanic crop cultivation, cattle raising, hide and tallow production, and the transport of goods to Yerba Buena cove, the location of the fledgling port of San Francisco.³⁵ Some of these Native American laborers may have lived in the settlement at Yerba Buena at least part time during the 1830s and 1840s; whether these included persons of Ohlone descent is unknown. Other Native Americans of various tribes who had resided at Mission Dolores relocated to ranchos on the San Francisco Peninsula. The main centers of native life and culture on the San Francisco Peninsula after secularization were at Mission Dolores and Rancho San Mateo, 20 miles to the south,³⁶ and possibly the Sanchez Adobe, a former Mission Dolores outpost in Pacifica.

On July 9, 1846, during the Mexican American War, Army Captain John B. Montgomery claimed San Francisco for the United States. In the following year, a census recorded only 34 Native Americans (tribes not specified) in the San Francisco area.³⁷ With the discovery of gold in the Sierra Nevada foothills in 1848, gold seekers from around the world flooded into San Francisco, the closest seaport to the gold-rich foothills. As a result, the total population of San Francisco grew from 600 in 1848 to 100,000 by 1849.³⁸ French traveler Ernest De Massey, who visited Mission Dolores in 1849, recounted that “[a]bout one hundred and twenty persons live around the Mission. Most of them are Mexicans, Indians or half-breeds; Europeans and Americans are in the minority.”³⁹ German traveler Friedrich Gerstaecker, who also visited San Francisco during the gold rush, noted that some Native American women who lived around Mission Dolores at that time were employed as domestic servants or took in washing and sewing for Hispanic families. Gerstaecker also notes that there were “still small bands of these Indians roving about, camping in the open air, and living on what they secure in some way, or beg from the settlers” (Gerstaecker quoted in Engelhardt).⁴⁰ With the flood of unemployed immigrants during the mid-19th-

³⁵ Milliken, R.T., *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810*, Menlo Park, CA: Ballena Press, 1995.

³⁶ Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, p. 181.

³⁷ Soule, F., J.H. Gihon, and J. Nisbet, *The Annals of San Francisco*, D. Appleton and Company, New York, 1855, p. 178.

³⁸ Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, p. 182.

³⁹ DeMassey, Ernest, *A Frenchman in the Gold Rush*, translated by Marguerite Eyer Wilbur, California Historical Society, San Francisco, CA, 1927, p. 37.

⁴⁰ Engelhardt, Z., *San Francisco or Mission Dolores*, Franciscan Herald Press, Chicago, 1924, p. 318.

century gold rush, Native American labor was no longer sought after in urban areas.⁴¹ Historical scholars assert that Native American peoples continued to survive in urban areas but, due to challenges such as finding work, low wages, and a lack of housing, few individuals married or had children.⁴²

California enacted a series of laws in the 1850s that codified marginalization of the state's native peoples. In 1851, California's first governor called for a war of extermination to be waged "until the Indian race should become extinct."⁴³ Under this political regime, unemployed Native Americans could be arrested and sold as indentured laborers; orphaned Native American children could be taken and held in custody by white families until adulthood. Native Americans were allowed virtually none of the rights of citizenship.⁴⁴ Although not as physically violent as the state's sponsored bounties for murdering indigenous people in the mid-19th century, in practice, these laws led to enslavement of native peoples.

Despite this adversity, Native American peoples continued to persist on the San Francisco Peninsula.⁴⁵ Because of the disenfranchisement of people of native descent by this time, the census of native populations almost certainly was incomplete. A special California census in 1852 recorded only 140 Native Americans in San Francisco and San Mateo counties, and the U.S. census of 1860 reported only 93 "Indians"⁴⁶ in San Francisco and San Mateo counties and fewer than 1,400 throughout the Bay Area.⁴⁷ In the city, the 1860 and 1870 censuses document the disappearance of acknowledged Mission Dolores Indians from the public record and the emergence of an urban pan-California Indian community. Only 37 Indians were reported in San Francisco in 1860 and 45 in 1870, "remarkably low figures in a total San Francisco population of over 57,000 (1860) and 149,000 (1870)."⁴⁸ Because of the population shifts associated with missionization, the numbers most likely included individuals who represented or descended from Native American groups outside the San Francisco Bay Area as well as those of Ohlone descent.

⁴¹ Cook, Sherburne F., Migration and Urbanization of the Indians of California, in *Human Biology*, volume 15:33–45, 1943; Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, p. 180.

⁴² Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, p. 180.

⁴³ Hittell, T.H., *History of California*, volume 3, N.J. Stone & Company, San Francisco, 1898, p. 899.

⁴⁴ Heizer, Robert F., and Alan F. Almquist, *The Other Californians: Prejudice and Discrimination under Spain, Mexico, and the United States to 1920*, University of California Press, Berkeley and Los Angeles, CA, 1971; Castillo, Edward D., The Impact of Euro-American Exploration and Settlement, in California, *Handbook of North American Indians*, volume 8, Robert F. Heizer (ed.), Smithsonian Institution, Washington, D.C., 1978. pp. 99–127.

⁴⁵ Heizer, Robert F., and Alan F. Almquist, *The Other Californians: Prejudice and Discrimination under Spain, Mexico, and the United States to 1920*, University of California Press, Berkeley and Los Angeles, CA, 1971, p. 26.

⁴⁶ "Indians" is the term used in the census. It is assumed to refer to persons who identified themselves, or were identified by a census worker, as of Native America origin.

⁴⁷ Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, Table 9, p. 179.

⁴⁸ Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, p. 188.

Today, there are no known living descendants of the *Yelamu* Ohlone who once occupied the land now known as the City and County of San Francisco. Until recently, anthropologists believed that the last known descendant of a native of the San Francisco Peninsula died in the 1920s. However, the Association of Ramaytush Ohlone includes families who descended from an *Aramai Ramaytush* Ohlone individual, whose origin was a village in Pacifica. Geographically, these families are the closest known Ohlone descendants to the native bands of San Francisco and the only known living descendants of the *Ramaytush* Ohlone peoples.⁴⁹

Ohlone recognition and political assertion gained momentum during the early 20th century, spurred in part by legal suits brought against the U.S. government for reparations due California Native Americans for the theft of traditional lands. In 1928, under the Indian Land Claims Act, the state established a new roll of Native American descendants and, eventually, provided small reparations, in which some Ohlone participated.⁵⁰ More important, these lawsuits brought more attention to the rights of California's indigenous peoples and inspired a new focus on the reevaluation of rights due the community and its members.⁵¹ The political organization necessary to mount legal actions led to the formation of Native American advocacy groups throughout California, including a number of Ohlone groups.

A number of Ohlone groups have been politically active since the 1920s; that number increased by the 1960s. Their efforts sought to obtain federal recognition of their traditional land rights as well as their rights to be recognized as governmental bodies; preserve ancestral burial sites and control the treatment of ancestral human remains; preserve and renew their ancestral heritage, cultural traditions, and languages; and participate in community advocacy on American Indian issues.

In response to Native American advocacy as well as broader social justice movements, the San Francisco Board of Supervisors has formally acknowledged the *Ramaytush* Ohlone community as indigenous and sovereign people of San Francisco.⁵² This following acknowledgement is read at the opening of each board meeting:

The San Francisco Board of Supervisors acknowledges that we are on the unceded ancestral homeland of the *Ramaytush* Ohlone, who are the original inhabitants of the San Francisco Peninsula. As the indigenous stewards of this land and in accordance with their traditions, the *Ramaytush* Ohlone have never ceded, lost, nor forgotten their responsibilities as the caretakers of this place, as well as for all peoples who reside in their traditional territory. As guests, we recognize that we benefit from living and working on their traditional homeland. We wish to pay our

⁴⁹ Milliken, R., L. Shoup, and B. Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and Their Neighbors, Yesterday and Today*, prepared by archaeological/historical consultants for National Park Service, Golden Gate National Recreation Area, San Francisco, CA, 2009, p. 2; Milliken, R., R. Fitzgerald, M. Hylkema, R. Groza, T. Origer, D. Bieling, A. Levanthal, R. Wiberg, A. Gottsfield, D. Gillette, V. Bellifemine, E. Strother, R. Cartier, and D. Fredrickson, *Punctuated Cultural Change in the San Francisco Bay Area*, in *California Prehistory: Colonization, Culture, and Complexity*, T. L. Jones and Kathryn A. Klar (eds.), AltaMira Press, Walnut Creek, CA, 2007, pp. 99–124.

⁵⁰ Many individuals who identify as Ohlone today descend from individuals listed as “Mission Indians” in the 1928 Lands Claim Act rolls. This not only reflects, but also has contributed to, the long-term struggle of Ohlone groups to obtain formal tribal recognition by the federal government.

⁵¹ Lowell Bean, *The Ohlone Past and Present: Native Americans of the San Francisco Bay Region*, in *Ballena Press Anthropological Papers*, No. 42, Menlo Park, CA, 1994, p. xxiv.

⁵² San Francisco Board of Supervisors, *Motion Amending the Rules of Order of the Board of Supervisors by Adding Rule 4.7.1 to Require the President to Read a Statement Acknowledging the Ramaytush Ohlone Community*, approved December 8, 2020, <https://sfgov.legistar.com/View.ashx?M=F&ID=9014184&GUID=D71B710F-9C5C-4094-8133-ACC7507D47F1>.

respects by acknowledging the Ancestors, Elders, and Relatives of the *Ramaytush* Ohlone community and by affirming their sovereign rights as First Peoples.

City commissions and departments have also incorporated the land acknowledgment into their public hearings and public materials. In addition, the City and County of San Francisco recognized the *Ramaytush* Ohlone as the original peoples of San Francisco in the Indigenous Peoples' Day Proclamation of 2019.⁵³ In addition, at the encouragement of and in consultation with the Native American community and other groups, the planning commission and the historic preservation commission passed resolutions in the summer of 2020, apologizing for the history of racist, discriminatory, and inequitable historic preservation and planning policies and practices in San Francisco and committed to centering the work program of the department on racial and social equity—specifically, to increasing the involvement of historically disenfranchised communities, including Native American peoples.⁵⁴

American Indian Cultural District⁵⁵

In addition to Ohlone people who are traditionally and culturally affiliated with San Francisco, San Francisco is home to a vibrant American Indian community that includes Native Americans from tribes across the nation. In the 1950s, the federal government implemented a program to relocate rural Native Americans from their traditional lands to urban areas, with the intent of promulgating “cultural assimilation.” San Francisco was one of the principal relocation destinations, and the Mission neighborhood became a home base for many relocated people. Native Americans arriving in the city, separated from their community support systems, were not provided adequate government and social services. The growing Native American pan-Indian community in the Mission neighborhood developed its own support systems to fill the void; these included social services, help with employment and housing, and opportunities for political empowerment. The community also came together to develop cultural and educational programming, preserve native languages and cultural traditions, establish community gathering spaces, and sponsor community events, including some of the first urban pow wows. One of the hubs for these activities was the first San Francisco American Indian Center, founded in the 1940s. These American Indian-based enterprises, as well as the rich cultural history of the area, are at the heart of the San Francisco American Indian community. In 2020, at the behest of representatives of the American Indian Center, including *Ramaytush* Ohlone representatives, the City and County of San Francisco formally recognized an American Indian cultural district in San Francisco’s Mission neighborhood. The recognition of this cultural district and the activities of the American Indian Center are part of the ongoing work of the indigenous community for recognition and equity.

⁵³ Ordinance No. 221-19, amending City and County of San Francisco Administrative Code section 1, article 1, chapter 16.4, <https://sfgov.legistar.com/View.ashx?M=F&ID=7788560&GUID=DB0EB445-4F0D-4795-9DC4-0FA9E60229FD>.

⁵⁴ San Francisco Historic Preservation Commission, *Resolution No. 1127, Centering Preservation Planning on Racial and Social Equity*, adopted July 15, 2021, https://sfplanning.org/sites/default/files/documents/admin/R-1127_HPC_Equity_Resolution.pdf.

⁵⁵ See “Cultural Districts,” p. 4.3-37, in Section 4.2, Cultural Resources, for additional information regarding the city’s cultural district program.

Regulatory Framework

This section describes the applicable state regulations that provide guidance regarding the identification, analysis, and mitigation of impacts related to tribal cultural resources. This section also provides an overview of the California Native American Heritage Commission (NAHC) and the Sacred Lands File.

NATIVE AMERICAN HERITAGE COMMISSION AND SACRED LANDS FILE

The NAHC is charged with preventing interference with the expression of Native American religion in California, preventing damage to Native American sacred sites and ensuring access, and creating an inventory of sacred places (i.e., the Sacred Lands File, a confidential database with the locations of known Native American sacred sites and human remains).⁵⁶ It is also responsible for identifying the most likely descendant (MLD) when Native American human remains are discovered in any place other than a dedicated cemetery. MLDs have legal authority to make recommendations regarding the treatment and disposition of discovered remains. Although they cannot halt work on a project site, the recommendations give MLDs the means to ensure that Native American human remains will be treated in the appropriate manner. The NAHC protects Native American burial sites and skeletal remains from vandalism and inadvertent destruction. It also provides the legal means by which Native American descendants can make known their concerns regarding the need for the sensitive treatment and disposition of Native American skeletal remains and items associated with Native American burials.

NATIVE AMERICAN HISTORIC RESOURCE PROTECTION ACT

California Public Resources Code section 5097.993 establishes that a person who unlawfully and maliciously excavates, removes, destroys, or defaces a Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources (California register) is guilty of a misdemeanor if the act was committed with specific intent to vandalize, deface, destroy, steal, convert, possess, collect, or sell a Native American artifact, art object, inscription, feature, or site. Civil penalties include imprisonment and fines up to \$50,000 per violation.

Native Americans: California Environmental Quality Act

CEQA sets forth requirements for public agency consultation with California Native American tribes, defines tribal cultural resources, and requires environmental analyses to consider impacts on tribal cultural resources (CEQA sections 21080.3.1, 21080.3.2, and 21082.3). Furthermore, lead agencies are required to analyze project impacts on tribal cultural resources (CEQA sections 21074). Specifically, CEQA section 21080.3.1 requires lead agencies to consult with geographically affiliated California Native American tribes regarding tribal cultural resources that may be affected by any project that requires the preparation of a negative declaration, mitigated negative declaration, or EIR. The NAHC maintains a list of traditionally and culturally affiliated tribal representatives for consultation in each county in California. This list typically includes representatives of federally recognized tribal groups that are traditionally and culturally affiliated with each area. However, the federal government today does not formally recognize any of the Ohlone Native American tribes that self-identify as traditionally or

⁵⁶ It is assumed that subsequent legislation pertaining to tribal cultural resources also applies to sacred lands identified in the Sacred Lands File.

culturally affiliated with San Francisco. In light of barriers to the identification of modern tribes or individuals who are culturally and traditionally affiliated with specific locations in the San Francisco Bay Area, the NAHC list of tribal representatives for San Francisco Bay Area counties was initially open to all individuals and groups that wished to be listed as Native American tribal representatives and were able to trace their descendancy from a “Mission Indian” (i.e., Bay Area Native American) who had been listed on the 1928 Indian Lands Claims Act tribal rolls, irrespective of affiliation with a specific subregion of the San Francisco Bay Area. The NAHC lists a number of Ohlone tribes as traditionally affiliated with San Francisco Bay Area counties, including representatives for San Francisco, and updates this list regularly to reflect changes in tribal organization. Ohlone individuals who might be loosely affiliated with a tribal group but have not formally enrolled in a group or been appointed as a group representative have also been included on past NAHC lists.

The NAHC tribal consultation list is not, nor is it intended to be, a comprehensive roll of Native Californian individuals or groups. Groups who wish to be listed apply to the NAHC. The NAHC has a process for evaluating applications. Some individuals or groups, such as the Association of Ramaytush Ohlone, have elected not to apply and are therefore not presently listed as formal tribal representatives. The department consults with tribal representatives and Ohlone individuals who have been or are currently listed by the NAHC as well as groups that are recognized in the Ohlone community and have indicated that they wish to consult.

Under CEQA section 21080.3.1, if a California Native American tribe requests consultation on a project within 30 days of notification, the lead agency must begin the consultation process within 30 days. Consultation with a tribe may include a discussion regarding the type of environmental review necessary, the identification of significant tribal cultural resources, and the significance of the project’s impacts on identified tribal cultural resources. As part of the consultation process, the parties may propose alternatives and/or mitigation measures to reduce significant impacts on tribal cultural resources. Under CEQA section 21080.3.2(b), the consultation process shall be deemed concluded when either (a) the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource, if a significant effect exists, or (b) a party, acting in good faith, concludes, after reasonable effort, that mutual agreement cannot be reached. If a tribe does not request consultation, or otherwise assist in identifying mitigation measures during the consultation process, a lead agency may still consider mitigation measures if the agency determines that a project will cause a substantial adverse change in a tribal cultural resource. CEQA section 21084.3(b) provides examples of such mitigation measures to be considered by lead agencies to avoid or reduce significant adverse impacts on tribal cultural resources; these include preservation in place and permanent conservation easements.

CEQA section 21074 indicates that a tribal cultural resource may be found significant if it is on or meets the criteria of the California register) or is listed on a local historical register. The California register criteria for the identification of historical resources, including significant tribal cultural resources, as defined in Public Resources Code section 5024.1(c), are the following:

1. The resource is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
2. The resource is associated with the lives of persons important in our past.

3. The resource embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
4. The resource has yielded, or may be likely to yield, information important in prehistory or history.

CEQA section 21074(a)(2) states that the lead agency, at its discretion and based on substantial evidence, in determining whether a resource meets the above California register criteria, “shall consider the significance of the resource to the California Native American tribe.” CEQA section 21080.3.1(s) notes that “the legislature finds and declares that California Native American tribes... may have expertise concerning their tribal cultural resources.” Based on guidance from the California Office of Planning and Research, substantial evidence that may support the lead agency’s determination may include tribal elder testimony, oral history, tribal government archival information, the testimony of a qualified archaeologist certified by the relevant tribe, testimony of an expert certified by the tribal government, official tribal government declarations or resolutions, formal statements from a certified tribal historic preservation officer, and historical notes or other anthropological records. In summary, when a lead agency identifies a resource as a tribal cultural resource, that determination should be supported with substantial evidence by applying the criteria in the California register and considering the significance of the resource to a California Native American tribe.

TRADITIONAL TRIBAL CULTURAL PLACES

Government Code sections 65352.3, 65352.4, 65562.5, and 65092 establish the responsibilities of cities and counties with respect to contacting and providing notice to California Native American tribes. The term “California Native American tribe” is defined as “a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC.” Prior to the adoption or amendment of a city or county’s general plan or adoption or amendment of specific plans, the city or county consult with California Native American tribes for the purpose of preserving specified places, features, and objects within the city or county’s jurisdiction. On May 25 and July 27, 2021, the department provided notification on the housing element update and consultation began in June 2021.

Planning Department Tribal Consultation Policy and Practices

In 2015, the department undertook tribal outreach with Ohlone tribal representatives who were listed on the then-current NAHC tribal consultation list for San Francisco County. The purpose of department outreach was to identify tribal representatives who wished to receive notices from the city regarding its proposed projects and policies and elicit input from tribal representatives concerning the identification and treatment of potential tribal cultural resources in San Francisco that could be affected by these projects and policies. The NAHC Sacred Lands File presently does not identify any sacred lands, which would be assumed to be tribal cultural resources, in San Francisco. However, in 2015, local tribal representatives recommended that all Native American archeological resources and human remains of Native American origin in San Francisco be considered potential tribal cultural resources. At that time, tribal representatives did not identify any other tribal cultural resources in San Francisco. General consultation in 2015 found that appropriate mitigation for impacts on a Native American archeological resource should include consultation with local tribes regarding whether the resource is a tribal cultural resource; preservation in place, if feasible; and, if preservation is not feasible, archeological data recovery with a

Native American monitor, followed by Native American consultation and involvement in the development and implementation of a public interpretive plan for the resource. Such measures have been implemented routinely for projects in the city that affected Native American archeological sites. Furthermore, the measures are reflected in the mitigation measures identified below as well as the archeological resource mitigation measures identified in Section 4.2, Cultural Resources.

For this EIR, the department obtained the updated NAHC list of tribal representatives for San Francisco in October 2020. In January 2021, the department renewed its tribal cultural resources outreach efforts to local tribal representatives to identify those who wished to be informed of upcoming projects and elicit input regarding the tribal cultural resource policies the city established in 2015. The department also extended tribal outreach to individuals who had formerly been NAHC listed and participated in the 2015 Native American consultation as well as other Ohlone interested parties identified subsequently, as discussed in “Regulatory Framework,” above. Ohlone interested parties include representatives of the Association of Ramaytush Ohlone who, as referenced above, are descendants of the last known Ramaytush Ohlone individual. Details related to the notification and consultation undertaken for this EIR are provided in “Housing Element Update EIR Tribal Consultation,” below.

Environmental Impacts

This section describes the impact analysis related to tribal cultural resources associated with implementation of the proposed action. It describes the methods used to determine the representative impacts of the proposed action and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts accompany the discussion of each identified significant impact.

SIGNIFICANCE CRITERIA

The proposed action would have a significant effect if it would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and:

- Listed or eligible for listing in the California register or a local register of historical resources, as defined in Public Resources Code section 5020.1(k) or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision(c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision(c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe

APPROACH TO ANALYSIS

Detailed discussions of the overall approach to analysis are provided in “E. Analysis Assumptions” in Chapter 4, Environmental Setting and Impacts. The environmental impact analysis in the EIR uses projected future conditions (2050) under the existing 2014 housing element as the baseline against which environmental impacts

are assessed. Under the proposed action, the department projects that approximately 150,000 housing units would be constructed in the city by 2050 compared to 2020 conditions. The department projects that approximately 102,000 housing units would be constructed by 2050 under the existing 2014 housing element (i.e., the 2050 environmental baseline) compared to 2020 conditions. In other words, the department predicts that approximately 50,000 more housing units would be constructed by 2050 if the housing element update is adopted compared with the development anticipated to occur under the existing 2014 housing element. Because the housing element update does not include any changes to existing zoning or other land use controls and would not authorize any new development, further actions would be required to implement the proposed action. As such, the housing element update itself would have no direct physical environmental impacts. Therefore, this EIR identifies the reasonably foreseeable environmental impacts that could occur as a result of reasonably foreseeable future actions that would implement the goals, policies, and actions of the housing element update, including impacts from the construction and operation of an additional 50,000 housing units by 2050.

Tribal cultural resources are identified through consultation with tribal representatives. As discussed above, based on prior tribal consultation, all archeological sites and human remains of Native American origin in San Francisco are considered to be tribal cultural resources. On this basis, the potential for impacts on tribal cultural resource is based in part on archeological sensitivity. The archeological sensitivity assessment prepared for the proposed action (Appendix F.2 of this EIR) includes analysis of the relative sensitivity of various areas of the city for the presence of Native American archeological resources. **Table 4.2-9**, p. 4.2-101, in Section 4.2, Cultural Resources, summarizes the assessed archeological sensitivity by planning district.

Tribal cultural resources may also be identified in project-specific tribal consultation. The results of tribal consultation regarding the potential for the housing element update to result in impacts on tribal cultural resources, undertaken during summer and fall 2021, are discussed below.

Housing Element Update EIR Tribal Consultation

In compliance with the tribal consultation requirements discussed above, the department sent letters to the NAHC citywide contact list, NAHC-listed tribal representatives, and Ohlone interested parties on May 25 and July 27, 2021, informing them of the proposed action and associated CEQA review and soliciting input regarding tribal cultural resources. Two Ohlone representatives requested consultation on the proposed action. The department initiated consultation directly with these Ohlone representatives in June 2021.

Identification of Tribal Cultural Resources

Archeological Tribal Cultural Resources

During consultation related to this EIR, Native American representatives confirmed the conclusion of prior consultation that all Native American archeological sites, both known and as-yet undiscovered sites, should be presumed to be tribal cultural resources, unless determined otherwise through consultation between the department and tribal representatives.

Non-Archeological Tribal Cultural Resources

During Native American consultation for this EIR, Native American representatives noted that both the locations of modern natural water sources and historical water sources are culturally important to the Ohlone and, as such, potential locations of non-archeological tribal cultural resources. As expressed during consultation, areas where land meets water along San Francisco Bay, ocean shorelines, creeks, and other natural water sources are valued by Ohlone tribes, the beneficiaries and stewards of these environments. Such locations, which are important for their traditional plant and animal resources, exemplify the Ohlone spiritual relationship with these locations as well as the habitats that were or are present at these locations. In addition, the historical creek network was identified during consultation as a critical element in the physical and cultural connection between Ohlone groups and village settlements.

The cultural importance of the shoreline as well as creeks, wetlands, and other water sources in Ohlone traditional lifeways, as identified in consultation with Native American representatives for this EIR, is confirmed by the archeological record and the fact that numerous known archeological sites are located along such waterways (see “Environmental Setting,” above, and Section 4.2, Cultural Resources). In addition, materials found in Native American archeological deposits in San Francisco demonstrate the importance of ocean, bay, and other water resources in both the Ohlone diet and material culture as well as their ritual and ceremonial lives. The importance of these locations is also substantiated in the ethnographic record, which includes extensive and comprehensive evidence of use by the Ohlone of a wide variety of natural resources from the sea, shoreline, marshlands, and riparian settings as well as Ohlone elaboration of technologies for the acquisition, processing, and storage of such resources. The record also provides evidence regarding the roles these locations and related resources and technologies hold in traditional Ohlone spiritual and ritual lives.

Historical Water Sources

Native Americans are documented to have lived along the San Francisco shoreline for at least 8,000 years, as evidenced by radiocarbon dating of a recently discovered archeological site that had been submerged beneath Mission Bay.⁵⁷ During that time, the location of the shoreline changed dramatically. First, change resulted from progressive inundation of the shoreline, which moved inland as the bay filled at the end of the last Ice Age. Next, extensive marshes formed around the bay over a period of several thousand years. Most recently, in the last 170 years, extensive landfill moved the shoreline bayward. In addition, the locations of the creeks that drained San Francisco and the many ponds, springs, and inland freshwater marshes that existed historically have been altered drastically over this time—most markedly during the historic period when most creeks were diverted and channelized. Furthermore, many springs and ponds dried up through agricultural activity or were filled in as part of ongoing development. Despite these ongoing changes, Ohlone representatives indicated during consultation that the historical locations of natural water sources retain cultural importance to local Native Americans as representations of their cultural heritage and cultural values. The historic locations of the bay and ocean shoreline, creeks, and other water sources are valued by the Ohlone today as potential locations of archeological

⁵⁷ AECOM, *1140 Seventh Street Archeological Testing Report and Archeological Data Recovery Plan Final Memo*, March 2019, on file at San Francisco Planning Department.

tribal cultural resources, which include traditional village sites. These locations are potential sources of paleoenvironmental data, which is information about plant species, wetlands and other water resources, wildfires, rainfall, and other environmental factors that are important in understanding how Ohlone life changed over the past 8,000 years.

Modern Shoreline and Modern Remnants of Historical Water Sources

Ohlone representatives indicated during consultation that the modern shoreline and the modern locations of aboveground remnants of creeks and natural ponds are culturally valued and representative of Ohlone spiritual values, along with Ohlone values concerning conservation and stewardship. The modern shoreline—defined as the narrow band along the waterfront where water meets the land—and areas where the remnants of historical creeks and natural ponds are present on the modern landscape exemplify important traditional values. As expressed during consultation, the land along the shoreline and around water sources is an interface zone that holds symbolic cultural value. This zone is valued as an important source of traditional plant and animal resources that exemplifies the Ohlone relationship with shoreline lands, both as beneficiary and steward. In asserting the tribal cultural resource value of shoreline areas, tribal representatives acknowledged that the character and location of the bay shoreline have changed markedly over time. On this basis, the tribal connection with the shoreline is related not only to specific past shoreline locations that were buried or submerged because of sea-level rise or as a result of the placement of artificial fill during the historic period, as discussed above, but also to identifiable physical locations where the water/shore relationship is manifested today. The cultural importance of shoreline zones to the Ohlone is clearly demonstrated in the ethnographic record, which provides extensive evidence of their importance to Ohlone lifeways associated with a wide variety of shoreline resources and Ohlone elaboration of technologies for acquisition, processing, and storage, as outlined above. On this basis, these water sources and their associated shorelines are sensitive for the presence of potential non-archeological tribal cultural resources. The tribal cultural values represented by non-archeological tribal cultural resources are exemplified by locations where public access to the water's edge is available today as well as locations where native shoreline or riparian vegetation is still present or could be present.

In summary, both San Francisco's archeological record, which extends back almost 8,000 years, and the Ohlone ethnography recorded during the historic period support the high and enduring importance of the city's natural water sources and associated shorelines to the Ohlone. As identified during tribal cultural resources consultation, these identified water sources and associated shorelines are sensitive for the presence of potential tribal cultural resources that may or may not be represented by archaeological deposits or features. Native American representatives have indicated that the cultural significance of the water sources and their associated shorelines extends beyond the presence of Native American archeological resources alone and is based on their symbolic cultural value. The ecological relationship between the existing shoreline, the waters of the bay and the creeks that feed it, the natural resources of the shore, and the people who reside and have resided on the shores, as well as the changing spatial relationship between the land and the water, exemplify the values tribal representatives associate with both historical and current water sources.

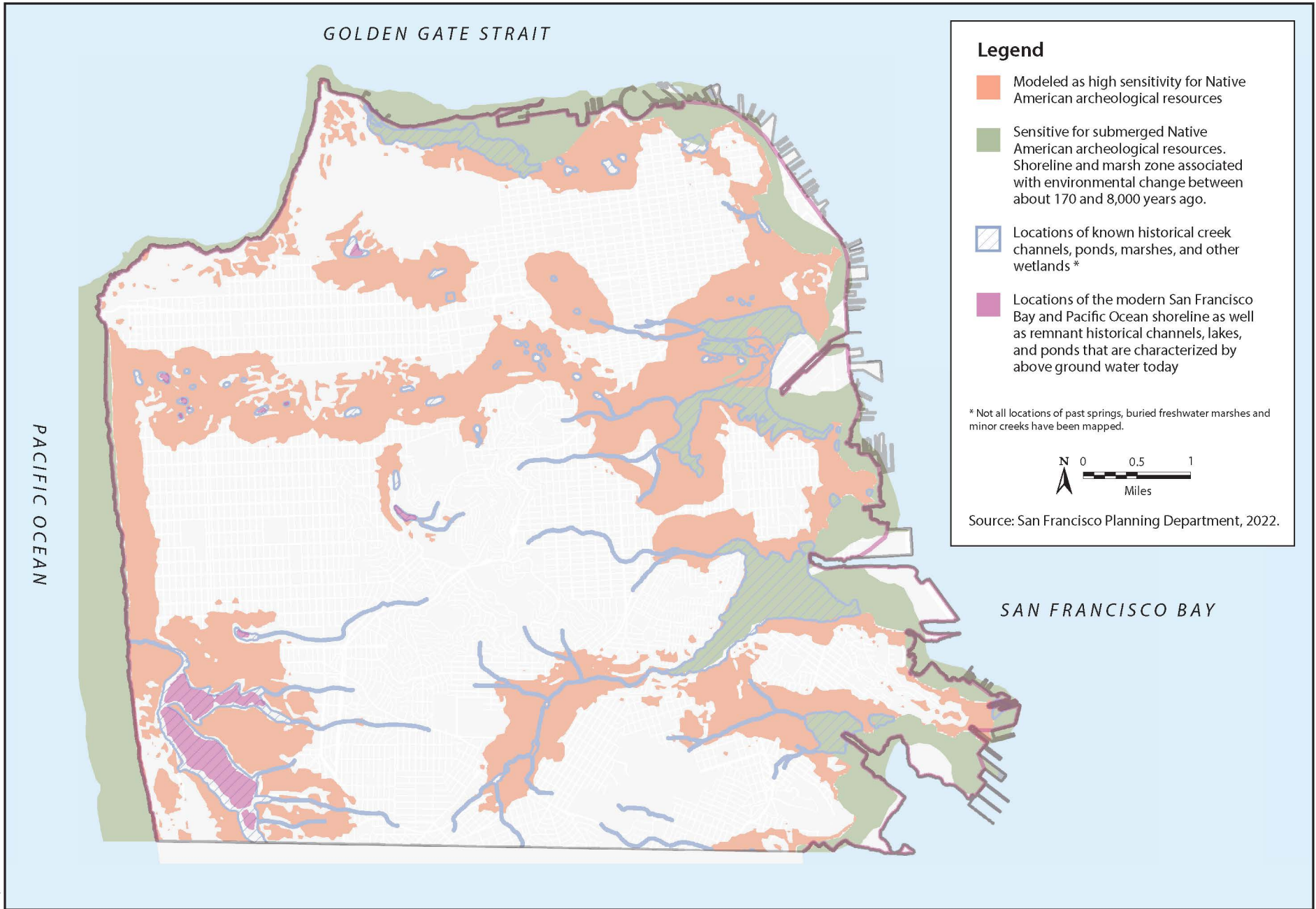
Based on Native American consultation, the following locations are identified as culturally important to local Ohlone and, therefore, determined to be potential tribal cultural resources:

- Locations modeled as having high sensitivity for Native American archeological resources
- The shoreline and marsh zone associated with natural environmental change over the period between about 8,000 years ago and 170 years ago, including areas modeled as having high sensitivity for archeological resources that were submerged by the rising bay
- Known historical locations of creek channels, ponds, marshes, and other wetlands
- The modern San Francisco Bay and ocean shoreline as well as the shores of remnant creek channels, lakes, and ponds that are characterized by above-ground water today

Figure 4.3-1, p. 4.3-19, shows these potential tribal cultural resource locations.

Although the tribal cultural values discussed above have been identified through consultation, the determination of whether a tribal cultural resource is present at a future development site and likely to be adversely affected by a particular future project depends on the location-specific development proposal. Ohlone representatives stated that, because of the programmatic nature of the proposed action, it was difficult for them to assess the potential for future development consistent with the housing element update to result in impacts on tribal cultural resources. For example, the potential for development along a creek corridor to result in impacts on an archeological or non-archeological tribal cultural resource depends on the proximity of a particular development site to a former creek channel, the proposed depth and extent of excavation, whether aboveground elements of the creek survive, whether there is presently access to the creek, and whether native vegetation is or could be present. Therefore, Ohlone representatives indicated that tribal notification regarding future development consistent with the housing element update in areas of potential sensitivity for tribal cultural resources is of critical importance to them, thereby providing opportunities for project-specific Native American consultation regarding tribal cultural resources. However, representatives also indicated that it would not be feasible or desirable for them to consult on every project, both because of the large number of projects that are likely to be proposed in the future and because not all projects would have the potential for impacts on tribal cultural resources or locations assessed as sensitive for tribal cultural resources. Further discussions between Native American representatives and the department have focused on identifying the subset of projects for which notification and consultation may be desired, actions that would be considered to represent significant impacts on tribal cultural resources, and mitigation measures that might reduce impacts to less than significant. The results of the discussions are detailed in the impact statements and mitigation measure provided below.

Tribal representatives indicated that it is important for the proposed action to provide opportunities for acknowledgement that San Francisco is the traditional tribal territory of the Ohlone and that the Ohlone never ceded land rights to a subsequent government. Opportunities for public interpretation of Ohlone culture and history also are desired. This request is reflected in the mitigation measure below.



IMPACTS AND MITIGATION MEASURES

Impact TCR-1: The proposed action would result in a substantial adverse change to an archeological tribal cultural resource. (*Less than Significant with Mitigation*)

Native American archeological resources are known to be present in many areas of the city, and many areas have been assessed as sensitive for the presence of undiscovered Native American archeological resources, as discussed under “Summary of Native American Archeological Sensitivity” in Section 4.2, Cultural Resources, and the archeological sensitivity assessment included in Appendix F.2 of this EIR. As discussed under Impact CR-2 in Section 4.2, construction activities associated with future development consistent with the housing element update have the potential to disturb or destroy both documented and previously undocumented Native American archeological resources. As noted above, all Native American archeological resources in San Francisco are presumed to be potential tribal cultural resources. This would constitute a *significant* impact on tribal cultural resources.

Mitigation Measure M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance and, as applicable, Mitigation Measure M-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources.

(See Section 4.2, Cultural Resources)

Mitigation Measure M-TCR-1: Tribal Notification and Consultation.

Applicability: This measure applies to both archeological tribal cultural resources and non-archeological tribal cultural resources. This measure shall be implemented for the following types of future development consistent with the proposed action:

- For each project for which preliminary archeological review, conducted by department archeologists, identifies the potential for impacts on a Native American archeological resource, which is presumed to be a tribal cultural resource, and
- At the initiation of planning for public interpretation of a significant Native American archeological resource, and
- For projects with one or more of the following characteristics where the project is located in an area identified as a potential tribal cultural resource:
 - Development footprint greater than or equal to 10,000 square feet and any soil disturbance greater than or equal to 10 feet deep
 - Use of piles or other deep foundation or deep soil improvements
 - Total soil excavation volume in excess of 1,500 cubic yards

- Development for which the city requires the inclusion of public open space, public art, or other public interpretative programs
- Development that includes habitat restoration, creek daylighting, or channelization that could affect native plants
- Development for which the department requires a streetscape plan under the Better Streets Plan (planning code section 138.1)

Notification. The department shall distribute a notification for projects that meet any of the characteristics above to parties on its local Native American tribal distribution list, including the Association of Ramaytush Ohlone and other interested Ohlone parties list. The notification shall include the project description; project location; anticipated depth and extent of soil disturbance necessary for construction; information on changes to public access, removal or addition of native plantings or habitat, and any proposed public interpretation, as relevant; the conclusions of the preliminary archeological review regarding potential impacts on Native American archeological tribal cultural resources; anticipated next steps, including proposed archeological identification and/or treatment for archeological tribal cultural resources; an invitation to consult on the project; and a timeline for requesting consultation, which is within 30 days after receipt of a notification.

Consultation. The department and project sponsor shall ensure that Native American tribal representatives who respond to the notification shall be provided the opportunity to consult on the proposed project. Consultation shall follow requirements identified in CEQA section 21080.3.2; if the Native American tribal representatives request consultation regarding alternatives to the project, recommended mitigation measures, or significant effects, the consultation shall include those topics. Consultation meetings shall occur primarily between department staff members and Native American representatives, with department staff members coordinating with the project sponsor. Project sponsors may join in consultation meetings if requested and agreed to by the Native American representative. Native American representatives shall be provided with project plans and details to review and given an opportunity to provide input with respect to whether the project as designed would affect a tribal cultural resource and, if so, how such an impact might be avoided or mitigated. For archeological tribal cultural resources, the department shall ensure that Native American representatives are informed of the sensitivity of the project site, as assessed by the department, and the presence of any known or discovered resources so that they can provide input on the archeological steps to be implemented, per Mitigation Measures M-CR-2a: Archeological Resources Requirements for Projects Involving Soil Disturbance and, as applicable, Mitigation Measure M-CR-2b: Archeological Monitoring Program; Mitigation Measure M-CR-2c: Archeological Testing Program; and Mitigation Measure M-CR-2d: Treatment of Submerged and Deeply Buried Resources, if requested by those tribal representatives. Additional measures on the treatment of tribal cultural resources may be developed through consultation. Consultation shall be concluded as defined in CEQA section 21080.3.2(b).

Site-specific measures identified through consultation to reduce or eliminate impacts would be implemented by the project sponsor in coordination with department staff members. Site-specific measures could include, but would not be limited to:

- Sampling and paleoenvironmental analysis of soils that would be affected by project piles or excavation for reconstruction of the Native American environmental setting
- Native planting and vegetation treatments in publicly accessible open spaces and community gathering areas that emphasize native and/or environmentally sustainable shoreline plants, such as those traditionally used by the Ohlone
- Public interpretive exhibits that educate the public and/or reflect tribal cultural heritage and values and address local Native American experience and history
- Ohlone land acknowledgements
- Public art by local Native American artists
- For projects that include public open spaces or onsite public access spaces within the project site (such as a community room), make the spaces available for events organized by the local Native American community, by arrangement with event space organizers
- Other educational tools and applications identified by tribal representatives through consultation with the tribe and determined by the environmental review officer (ERO) and the project sponsor to be feasible for inclusion in the project.

Different or additional project-specific mitigation measures may be identified through Native American consultation if, in consultation with the tribal representative, the project sponsor, and the ERO, they are determined to be equally effective as or more effective than the measures identified above in mitigating the specific impacts of development on tribal cultural resources.

Project-specific mitigation measures applicable to the specific proposal shall be agreed upon by the tribal consultants and the department in coordination with the project sponsor and implemented by the project sponsor, if determined feasible by the ERO.

If no tribal group requests consultation but the ERO determines that a proposed project may have a potential significant adverse effect on a tribal cultural resource, based on prior consultation, then the site-specific measures and treatments listed above, as applicable, may be required at the discretion of the ERO.

Compensation. Following on the initial tribal consultation, the ERO, project sponsor, and project archeologist, as appropriate, shall work with the tribal representative to identify the scope of work to fulfill the requirements of this mitigation measure, which may include participation in archeological monitoring, preparation and review of deliverables (e.g., plans, interpretive materials, art work). Tribal representatives shall be compensated for their work as identified in the agreed upon scope of work.

Conclusion

Based on tribal consultation conducted for the housing element update, Mitigation Measure M-TCR-1 was developed to require notification of Native American tribal representatives regarding environmental review of future development under the proposed action. If consultation is requested by a Native American tribal representative, Mitigation Measure M-TCR-1 specifies that consultation regarding archeological tribal cultural resources will focus on, but not be limited to, opportunities for tribal representatives to provide input on the treatment and interpretation of archeological resources and participate in archeological treatment if so desired.

Based on the identification of potential impacts on Native American archeological resources identified through preliminary archeological review for future development consistent with the housing element update, Mitigation Measure M-CR-2a and, as applicable, Mitigation Measure M-CR-2b, Mitigation Measure M-CR-2c, and Mitigation Measure M-CR-2d in Section 4.2, Cultural Resources, would also be implemented. Based on previous tribal cultural resources consultation and consultation undertaken for this EIR, these measures require that tribal representative be afforded the opportunity to consult on development of archeological investigation plans, participate in implementation of such plans as they relate to tribal cultural resources, and present or request that cultural resources awareness training programs for construction workers include Native American tribal representatives and specific training on the treatment of Native American archeological and tribal cultural resources. These measures also identify preservation in place, if feasible, as the preferred treatment for resources that are known or discovered during archeological investigations or during construction and require that tribal representatives be offered the opportunity to consult on preservation-in-place determinations and plans, if requested. In addition, these measures require that tribal representatives be offered meaningful opportunities to participate in the development of public interpretive materials that address Native American archeological and tribal cultural resources and that these materials include acknowledgement that the project is located on traditional Ohlone lands.

As discussed in Section 4.2, Cultural Resources, department procedures require preliminary archeological review of proposed projects that would result in soil disturbance in archeologically sensitive locations. If this review leads the department to determine that there is the potential for Native American archeological resources within a proposed project footprint that could be disturbed by project construction, this would be a significant impact, which would trigger implementation of Mitigation Measure M-CR-2a and, as applicable, Mitigation Measure M-CR-2b, Mitigation Measure M-CR-2c, and Mitigation Measure M-CR-2d in Section 4.2. Implementation of Mitigation Measure TCR-1 together with implementation of the abovementioned mitigation measures, would fully mitigate any significant impacts on Native American archeological tribal cultural resources, and impacts would be *less than significant with mitigation*.

Impact TCR-2: The proposed action would result in a substantial adverse change in the significance of a non-archeological tribal cultural resource. (*Less than Significant with Mitigation*)

As discussed above, tribal representatives have identified the past and modern San Francisco shoreline; the historical corridors of creek networks, ponds, marshes, and other wetland locations; and modern locations of aboveground remnants of creeks and natural ponds and their associated shorelines as highly sensitive for the presence of tribal cultural resources. The Ohlone have strong cultural ties with these areas, based on their native

environmental/traditional cultural associations. Based on consultation, such areas are potential sources of data important to Native American cultural and/or environmental reconstruction. Soil disturbance associated with construction within 25 feet of historical water sources or 50 feet of the bay shoreline could result in damage to or destruction of paleoenvironmental data related to Native American habitat and lifeways as they existed prior to the historic period and have cultural importance to Native Americans, as identified through consultation.

Based on consultation, development that would limit public access to the modern shoreline as it exists today or the modern locations of aboveground remnants of creeks and natural ponds and their associated shorelines, remove native plants or sensitive habitat or introduce plantings that are inconsistent with the shoreline habitat in these areas, or result in increased pollution of land or water as the result of environmentally unsustainable design or uses could result in impacts on potential tribal cultural resources.

Future development consistent with the proposed action would not occur within public parks or other lands associated with the modern shoreline or modern water sources under the jurisdiction of public agencies (e.g., Golden Gate Park, Mountain Lake, and Lake Merced as well as the majority of the modern bay and ocean shoreline). Additionally, future development consistent with the proposed action is not expected to limit public access to the modern shoreline as it exists today or the modern locations of aboveground remnants of creeks and natural ponds and their associated shorelines. However, future development consistent with the proposed action along existing shoreline areas in the Marina planning district could result in limited impacts on potential tribal cultural resources.

Based on the analysis above, future development consistent with the housing element update could result in the disturbance or destruction of non-archeological tribal cultural resources, which would be a *significant* impact.

Mitigation Measure M-TCR-1 under Impact TCR-1, above, would be implemented if a project is proposed in an area identified as potentially sensitive for tribal cultural resources and the project meets the criteria specified in the measure. For projects with these characteristics, the department would notify Native American tribal representatives, as detailed in the measure. This notification would offer tribes the opportunity to consult on the identification, treatment, and public interpretation of tribal cultural resources, ensuring that Native American cultural values would be prioritized in the treatment and interpretation of such resources.

Implementation of Mitigation Measure M-TCR-1 would provide tribal representatives the opportunity to consult with the department and project sponsors on whether a future development project as designed would affect a tribal cultural resource and provide input on design modifications, project additions, or other measures through which the project could be made more consistent with the tribal values represented by the resource. In addition, the impact could be mitigated through site-specific measures, such as the inclusion of public interpretive elements that address affected Native American values. With implementation of Mitigation Measure M-TCR-1, the impacts of future development consistent with the housing element update on non-archeological tribal cultural resources would be *less than significant with mitigation*.

Conclusion

Mitigation Measure M-TCR-1 would require notification of local tribal representatives, including the Association of Ramaytush Ohlone and other Ohlone interested parties, and an invitation to consult at the time a specific development is proposed consistent with the housing element update that meets the location and other criteria identified above in Mitigation Measure M-TCR-1.

For projects for which preliminary archeological review identifies potential impacts on Native American archeological resources, tribal representative would be offered the opportunity to participate in planning and implementation of archaeological monitoring, testing, and/or data recovery efforts in regard to treatment of tribal cultural resources. If an archeological tribal cultural resource is identified during archeological monitoring, testing, or construction, the resource would be preserved in place, if feasible. If, in consultation with tribal representatives, that is determined to be infeasible, archeological data recovery (consistent with Mitigation Measure M-CR-2a and, as applicable, Mitigation Measure M-CR-2b; Mitigation Measure M-CR-2c; and Mitigation Measure M-CR-2d in Section 4.2, Cultural Resources) would be implemented, followed by incorporation of a public interpretation/land acknowledgement program within public open space or community space that is an element of the project and developed in consultation with tribal representatives and the project sponsor. Additional measures for the treatment of tribal cultural resources may be developed through Native American consultation, if requested, as required per Mitigation Measure M-TCR-1.

For projects that meet the criteria identified in Mitigation Measure M-TCR-1, tribal representatives would be notified of project planning and public interpretive efforts at the time each specific project is proposed and consultation would be undertaken if requested by a tribal representative to identify and implement site-specific design modifications or other measures that would avoid impacts on and/or incorporate tribal cultural values and heritage perspectives. With implementation of these measures, significant impacts on archeological and non-archeological tribal cultural resources from housing development consistent with the housing element update would be *less than significant with mitigation*.

Cumulative Impacts

The projections for the housing element update include all anticipated housing and employment growth in the city through 2050. Therefore, the analysis of the housing element update's environmental impacts is largely a cumulative impact analysis by nature. The cumulative projects in the city that are not accounted for in either the 2050 environmental baseline or the proposed action are identified in Chapter 4, Environmental Setting and Impacts, in **Table 4.0-1** (p. 4-11), and shown in **Figure 4.0-1** (p. 4-12). The cumulative projects include the Port of San Francisco's Waterfront Plan Update, Bay Area Rapid Transit's Second Transbay Tube Project, Downtown Congestion Pricing, and Increased Caltrain Service plus Downtown Extension and Pennsylvania Avenue Extension. In addition, routine infrastructure repair, maintenance, and improvement projects (e.g., roadway repaving, water main replacements, sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through 2050 and are therefore considered in this cumulative analysis.

Impact C-TCR-1: The proposed action, in combination with cumulative projects, would result in a significant cumulative impact on tribal cultural resources. (*Less than Significant with Mitigation*)

As discussed above, tribal cultural resources include Native American archeological resources. They may also include locations along the historic shoreline, major stream corridors or areas around ponds, freshwater marshes, and other water sources that are historically mapped or known, based on archeological findings or other subsurface explorations. Tribal cultural resources may also include locations along the modern shoreline of San Francisco Bay, the Pacific Ocean, or streams, ponds, or other water sources that still include surface water today, as identified through Native American consultation. For tribal cultural resources, significant cumulative impacts could result if more than one project would affect the same tribal cultural resource.

The Downtown Congestion Pricing project would not have the potential for effects to the same tribal cultural resources as development consistent with the proposed action because this project does not propose construction or excavation. Future infrastructure repair, maintenance, and improvement projects that entail ground disturbance have the potential to impact known or as of yet unidentified tribal cultural resources that may also be impacted by future projects under the proposed action. While possible, a cumulative impact resulting from future infrastructure projects is considered low as the majority of such projects require limited ground-disturbance, often occur within previously disturbed portions of existing city streets, and generally would not result in other development activities identified through tribal consultation with potential to impact non-archeological tribal cultural resources, which limits their ability to impact a significant tribal cultural resource that would also be impacted by future development projects resulting from the proposed action. However, future development under the proposed action could occur in the same areas affected by the Increased Caltrain Service and Pennsylvania Avenue Extension, future development consistent with the Port of San Francisco's Waterfront Plan Update, and BART's Second Transbay Tube Project. Development consistent with the proposed action combined with these three cumulative projects has the potential to affect the same tribal cultural resources. Therefore, future development consistent with the proposed action, in combination with other projects in the area, could disturb or destroy known or as of yet unidentified tribal cultural resources. This could result in a significant cumulative impact on tribal cultural resources.

Future development consistent with the housing element update when combined with a cumulative project could result in a substantial adverse change in the valued elements of the archeological or non-archeological tribal cultural resource, which may include loss of information or interpretive value or diminishment of the cultural values associated with the resource. As described under Impact TCR-1, above, for archeological tribal cultural resources construction activities associated with future development consistent with the housing element update have the potential to disturb or destroy both documented and previously undocumented Native American archeological resources. Therefore, the proposed action has the potential to make a cumulatively considerable contribution to the significant cumulative impact.

Implementation of Mitigation Measure M-TCR-1 would ensure that Native American representatives would be afforded the opportunity to consult on individual projects that have the potential to result in impacts on archeological and non-archeological tribal cultural resources and identify culturally appropriate treatment measures if project-specific impacts on a tribal cultural resource are identified. For tribal cultural resources that

are also archeological resources, implementation of Mitigation Measure M-CR-2a and, as applicable, Mitigation Measure M-CR-2b; Mitigation Measure M-CR-2c; and Mitigation Measure M-CR-2d in Section 4.2, Cultural Resources, would reduce the proposed action's contribution to the significant cumulative impact to a less-than-significant level. These measures would also ensure that preservation-in-place of Native American archeological resources would be considered, and that tribal representatives would be consulted on public interpretation and land acknowledgement for Native American archeological resources. Thus, with incorporation of mitigation measures, the proposed action's contribution to any significant tribal cultural resources cumulative impact would not be cumulatively considerable and the impact would be less than significant. The cumulative impact on tribal cultural resources would be *less than significant with mitigation*.

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