

**CITY OF SAN MATEO**  
**Planning Commission Special**  
**Meeting**  
**September 12, 2023**  
**6:00 PM**

City Hall Council Chamber  
330 West 20th Avenue  
San Mateo CA 94403



**COMMISSION MEMBERS**  
John Ebner, Chair  
Seema Patel, Vice Chair  
Adam Nugent  
Martin Wiggins  
Margaret Williams

## **AGENDA**

**THIS MEETING CAN BE ATTENDED IN PERSON OR REMOTE BY JOINING ZOOM – SEE CODES BELOW.**  
**PUBLIC COMMENTS WILL BE ACCEPTED BOTH IN PERSON AND REMOTELY.**  
**SEE END OF AGENDA FOR OPTIONS AND INSTRUCTIONS ON HOW TO PARTICIPATE IN THE MEETING.**

To join via Zoom – click here: [September 12, 2023](#)

To join via telephone: (408) 638-0968

Webinar ID: 862 9808 2760 Passcode: 481358

Commissioner Williams will participate in this meeting via

teleconference from:

Office

181 Sand Point Rd.

Bar Harbor, ME 04609

The Planning Commission meeting will conclude by 11:00 p.m. unless otherwise extended by commission vote.  
Any unheard items will automatically move forward to the next regular meeting.

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### **CALL TO ORDER**

Pledge of Allegiance

Roll Call

### **PUBLIC COMMENT**

*During the public comment period, members of the public may speak on general items of interest within the Commission's jurisdiction that are not on the agenda. Each member of the public may speak for a maximum of three minutes with a maximum of 15 minutes for the entire public comment period. The Chair shall determine whether the matter is within the Commission's jurisdiction. The Commission shall not act on or discuss any matters raised during the public comment period, which are not on the agenda, but shall refer such matters to staff for review and/or request such matters be placed on a future agenda.*

### **NEW BUSINESS**

*The public will have an opportunity to comment during the Council's consideration of these items.*

#### **1. Draft Environmental Impact Report - General Plan 2040 and Climate Action Plan 2023 Technical Update**

Receive the staff presentation, take public comments and testimony, provide input on the Draft Environmental Impact Report (EIR), and direct staff to prepare a Final EIR, including responses to comments.

*CEQA: In accordance with Public Resources Code Section 21065, the Planning Commission's consideration of the Draft EIR is not a project subject to CEQA because it can be seen with certainty that this activity will not cause a physical change in the environment.*

## REPORTS AND ANNOUNCEMENTS

*Commission Members and Staff report on their various assignments and Commission requests for scheduling future items.*

## ADJOURNMENT

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**AGENDAS:** Agendas and material are posted on the City's website on the Friday preceding each Planning Commission Meeting and can be viewed on the City's website at [www.cityofsanmateo.org](http://www.cityofsanmateo.org) . Any supplemental material distributed to the Commission after the posting of the agenda will be made part of the official record.

**WATCHING A MEETING ON TV:** City Council meetings are broadcast live on Comcast/channel 27, Wave/channel 26, or AT&T/channel 99. For transmission problems during the broadcast, please call (650) 522-7099. For all other broadcast comments, call (650) 522-7040, Monday-Friday, 8 a.m. - 5 p.m.

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- 1) Public Meeting Portal [www.cityofsanmateo.org/publicmeetings](http://www.cityofsanmateo.org/publicmeetings)
- 2) City YouTube channel and stream it on YouTube: <http://youtube.com/CityofSanMateo>
- 3) Watch TV live stream: <https://www.cityofsanmateo.org/193/Channel-San-Mateo-Live-Stream>

### PUBLIC COMMENTS/REQUEST TO SPEAK

#### Prior to the Meeting

Send comments to: [planning@cityofsanmateo.org](mailto:planning@cityofsanmateo.org) until 4 p.m. the day of the meeting.

#### During the meeting

**By computer:** Click the link at the top of the agenda and you'll be added to the meeting. All attendees are muted by default. When the item of interest is open for consideration, select the "Raise Your Hand" icon and you will be called on at the appropriate time.

**By telephone:** Call (408) 638-0968 and enter the conference ID found at the top of the meeting agenda. When the item of interest is open for consideration, select \*9 to raise your hand. When called upon, press \*6 to unmute, state your name and provide your comments.

**By Zoom:** Click the link at the top of the agenda and you'll be added to the meeting. All attendees are muted by default. When the item of interest is open for consideration, select the "Raise Your Hand" icon and you will be called on at the appropriate time.

**In Person:** At the meeting complete a "Request to Speak" form, submit a request at the speaker kiosk or scan the QR code.

**ACCESSIBILITY:** In compliance with the Americans with Disabilities Act, those with disabilities requiring special accommodations to participate in this meeting may contact the Planning Division Office at (650) 522-7212 or [planning@cityofsanmateo.org](mailto:planning@cityofsanmateo.org). Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.





# CITY OF SAN MATEO

City Hall  
330 W. 20th Avenue  
San Mateo CA 94403  
[www.cityofsanmateo.org](http://www.cityofsanmateo.org)

## Agenda Report

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Agenda Number: 1

Section Name: NEW BUSINESS

Account Number:

File ID: 23-7868

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**TO:** Planning Commission  
**FROM:** Christina Horrisberger, Director  
**PREPARED BY:** Community Development Department  
**MEETING DATE:** September 12, 2023

**SUBJECT:**

Draft Environmental Impact Report - General Plan 2040 and Climate Action Plan 2023 Technical Update

**RECOMMENDATION:**

Receive the staff presentation, take public comments and testimony, provide input on the Draft Environmental Impact Report (EIR), and direct staff to prepare a Final EIR, including responses to comments.

**BACKGROUND:**

This public hearing is on the Draft Environmental Impact Report (EIR) for the Strive San Mateo General Plan 2040 (General Plan 2040) and the Climate Action Plan (CAP) 2023 Technical Update. The next Planning Commission meeting on September 26, 2023, will focus on the review of the Draft General Plan 2040.

Draft General Plan 2040 Overview

The City's General Plan Update began in Fall 2018 with a series of visioning workshops and community meetings. From April 2019 through October 2023, the General Plan team held a series of meetings and events to establish the General Plan study areas, create the range of alternatives, confirm the draft alternatives, and receive feedback and direction on the preferred land use and circulation scenarios as well as on goals and policies from the community and, ultimately, the City Council. More information about the background information, technical reports, and outreach process, including meeting materials and recordings, is available at [www.StriveSanMateo.org](http://www.StriveSanMateo.org).

To date, the General Plan Update effort has focused on crafting a shared community vision for San Mateo in the year 2040, selecting the preferred land use and circulation scenarios that will guide the General Plan's Land Use and Circulation Elements, establishing the goals and policies for all the elements in the General Plan, and compiling all of these efforts into the Draft General Plan 2040. Draft General Plan 2040 was published on July 17, 2023, which started the next phase of community outreach and engagement. Public meetings, workshops, and pop-up events, as well as online commenting, will occur through October 2023.

Draft General Plan 2040 is made up of a Vision Statement and Guiding Principles, text describing key issues of community interest, and goals and policies that outline how the City will address those issues, as well as accompanying maps and diagrams. A full version of the Draft General Plan 2040 is included in Attachment 1. Each element of the General Plan also includes a concise set of background narratives that summarizes current conditions in the city related to the topics in the element. The background information provides context about the issues the City plans to address, explaining why there is policy direction so that the policies and actions can focus on how the City can achieve a desired outcome. The narratives also provide information on other regulations and/or agencies that influence the decisionmaking process. Together, these items are intended to guide the community's future development.

Each element, or chapter, of the General Plan addresses a specific set of topics and includes a set of goals, policies and actions that provide a blueprint for how the City will address these issues. These goals, policies, and actions provide guidance to the City on how to direct change and manage resources over the next 20 years.

#### CAP 2023 Overview

A technical update to the City's Climate Action Plan (CAP) has also been prepared to ensure the CAP is aligned and consistent with the Draft General Plan 2040 ([Attachment 2](#)). Although the CAP was recently updated and adopted in 2020, the General Plan 2040 Update, in combination with recent changes to State-level greenhouse gas (GHG) reduction targets, necessitated a partial and focused technical update to the CAP in order to allow the CAP to maintain consistency with the General Plan 2040 when adopted and continue to serve as a qualified GHG reduction strategy.

The project team also used this CAP 2023 Technical Update opportunity to align with new State laws and best practices, including Assembly Bill (AB) 1279, which codified the State's commitment to be carbon neutral by 2045. As part of this commitment, AB 1279 directs a minimum statewide reduction of GHGs to at least 85% below 1990 levels by 2045. The 2020 CAP, as currently adopted, includes per-capita GHG reduction targets for 2030 and 2050. The 2022 California Air Resources Board (CARB) Scoping Plan no longer recommends the use of per-capita targets for local jurisdictions. To remain a qualified GHG reduction strategy and streamline future environmental review of development projects, the CAP must be covered by a CEQA document. Therefore, the Draft EIR on General Plan 2040 also covers the CAP 2023 Technical Update.

#### Overview of the Draft Environmental Impact Report

As required by CEQA, the City has prepared a Draft EIR to address the potential environmental effects associated with the adoption and implementation of Draft General Plan 2040 and CAP 2023 Technical Update. The Draft EIR is included as [Appendix 3](#) and the Draft EIR appendices are included as [Attachment 4](#). Because of the long-term planning horizon of the proposed project and the permitting, planning, and development actions that are related both geographically and as logical parts in the chain of contemplated actions for implementation, the Draft EIR was prepared as a program EIR, pursuant to Section 15168 of the CEQA Guidelines. Pursuant to the CEQA Guidelines, Section 15378[a], the proposed Draft General Plan 2040 and CAP 2023 Technical Update are considered a "project" subject to environmental review and are together referred to as the "proposed project" in the Draft EIR.

The CEQA environmental review process started on January 12, 2022, with issuance of a Notice of Preparation ("NOP") of an EIR for a 30-day review period. A public scoping meeting was held on January 25, 2022 to accept public input on environmental topics to be analyzed in the EIR and approaches to the impact analyses. During this time, the City received comment letters from three government agencies and 40 community members, which were incorporated where appropriate into the analysis within the Draft EIR.

A Notice of Availability of the Draft EIR for review and comments by the public was issued on August 11, 2023. The Draft EIR was distributed to local, regional, and State agencies, and interested parties and was also posted in the newspaper, to advise the general public of its availability. The Draft EIR was made available for review to interested parties on the project website at [www.StriveSanMateo.org](http://www.StriveSanMateo.org). This Planning Commission public hearing provides an opportunity for staff to receive oral comments on the Draft EIR. Written comments can be submitted until the end of the 45-day review period, which closes at **5:00pm on September 25, 2023**.

The EIR evaluation included a detailed analysis of impacts in eighteen (18) environmental topic areas, analyzing the proposed project, and alternatives to the proposed project, including a No Project Alternative. The EIR discloses the environmental impacts expected to result from implementation of the proposed project, including the effects of potential future buildout during both construction and operational phases. Impacts under the following 15 environmental topic areas were determined to be less than significant with implementation of the General Plan goals, policies, and actions.

- Aesthetics
- Biological Resources
- Cultural Resources
- Energy

- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Parks and Recreation
- Population and Housing
- Public Services
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

The EIR identified eight potentially significant impacts in the Air Quality, Noise and Wildfire topic areas. While the following impacts can be lessened by General Plan policies and actions, they cannot be fully mitigated to a less-than-significant level and would therefore remain significant and unavoidable:

- AQ-2: Construction of development projects that could occur from implementation of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds and cumulatively contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.
- AQ-3: Operation of development projects under the proposed project would generate operational emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>).
- AQ-4: Construction emissions associated with development under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District's project-level and cumulative significance thresholds.
- AQ-6: Implementation of the proposed project would generate a substantial increase in emissions that exceeds the Bay Area Air Quality Management District's significance thresholds and would cumulatively contribute to the nonattainment.
- NOISE-1: Buildout under the proposed project is anticipated to result in unacceptable traffic noise with an increase of more than 5.0 dBA Ldn over existing conditions along one roadway segment (1<sup>st</sup> Avenue west of B Street) within the EIR Study Area.
- NOISE-6: Buildout under the proposed project is anticipated to result in unacceptable cumulative traffic noise within the EIR Study Area.
- WILD-2: Development under the proposed project would increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.
- WILD-5: Potential development under the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones, or Wildland Urban Interface, result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

When a project has significant and unavoidable impacts, a "Statement of Overriding Considerations" will need to be adopted when the EIR is certified as part of General Plan adoption. The Statement of Overriding Considerations would identify how the economic, legal, social, technological, and/or other benefits of a proposed project could outweigh the potential adverse environmental effects. Examples of these benefits might be providing affordable housing, reducing per capita vehicle miles traveled, or supporting local businesses. The requirements for a Statement of Overriding Considerations are established in CEQA Guidelines Section 15093 and in Public Resources Code Section 21081.

The Draft EIR also analyzes alternatives to the proposed project that are designed to reduce the significant environmental impacts of the proposed project and feasibly attain most of the proposed project objectives. The two alternatives that were considered and analyzed in detail included the No Project Alternative (Current General Plan) and a Reduced Traffic Noise Alternative that would involve enhanced transportation demand management (TDM) requirements to reduce vehicle travel to a greater extent than under the proposed project. This alternative would accommodate the same amount of proposed development as the proposed project and would involve the same General Plan land use map and designations; it was considered the Environmentally Superior Alternative pursuant to CEQA Guidelines Section 15126.6.

#### DISCUSSION:

The goal of this meeting is for the Planning Commission to receive public comments and testimony, and provide input on the Draft EIR regarding whether it adequately assesses all impacts and evaluates a range of alternatives. Staff recommends that the Planning Commission accept public comments on the Draft EIR for the Strive San Mateo General Plan 2040 and the CAP 2023 Technical Update, provide input on these documents and then direct staff to prepare a Final EIR, including responses to all public comments received. Comments received on the Draft EIR during the 45-day public review period will be posted on [www.StriveSanMateo.org](http://www.StriveSanMateo.org) and included in the Final EIR.

#### NEXT STEPS:

The City is currently collecting feedback on Draft General Plan 2040 through a series of workshops, meetings, events, and online commenting tool as summarized in Table 1. Additional information about these upcoming activities and events is available at [www.StriveSanMateo.org](http://www.StriveSanMateo.org).

**Table 1 – Draft General Plan 2040 Outreach Activities and Events**

Event	Date
Citywide Mailers <ul style="list-style-type: none"> <li>Strive San Mateo Newsletter</li> <li>District Town Hall Meeting Notice</li> </ul>	Mailed to all households week of July 17, 2023 Mailed to all households week of August 14, 2023
Draft General Plan Online Commenting Tool	Monday, July 17 to Sunday, October 1, 2023
Virtual Workshop	Wednesday, August 16, 2023 at 6:30pm
General Plan Subcommittee Meeting	Tuesday, August 29, 2023 at 6:00pm, City Hall and Virtual
District Town Hall Meetings	<ul style="list-style-type: none"> <li>Thursday, August 31, San Mateo Senior Center</li> <li>Wednesday, September 6, Main Library</li> <li>Wednesday, September 13, King Community Center</li> <li>Wednesday, September 20, Bayside School Old Gym</li> <li>Thursday, September 28, The Nueva School Gym</li> </ul>
Self-Guided Open House Displays	Exhibits available at: <ul style="list-style-type: none"> <li>City Hall</li> <li>Downtown Library</li> <li>Hillsdale Branch Library</li> <li>Marina Branch Library</li> <li>King Community Center</li> </ul>
Pop-up Events	Dates and Locations TBD
Community Group Presentations	Dates and Locations TBD

Following this meeting, the next steps to finalize the Draft General Plan 2040, Climate Action Plan Technical Update, and Final EIR include:

- Continue to collect community comments on the Draft General Plan 2040 as outline above through October.
- Hold a public meeting before the Planning Commission on **September 26, 2023** to receive input and comments on the Draft General Plan 2040.

- Hold public meetings before the City Council scheduled for **October 2, 2023, October 16, 2023, and October 30, 2023** to review the input from the community, GPS, Planning Commission, and provide direction on Draft General Plan 2040.
- Prepare written responses to comments received on the Draft EIR which will be compiled in the Final EIR, with a target to publish in **January 2024**.
- Finalize General Plan 2040 per Council direction, with a target to publish in **January 2024**.
- Hold two Planning Commission hearings in early 2024 to provide recommendations to the City Council on General Plan 2040, CAP 2023 Technical Update, and the Final EIR.
- Hold City Council meetings in **March 2024** to consider adoption of General Plan 2040 and the CAP 2023 Technical Update and certification of the EIR.

#### **ENVIRONMENTAL DETERMINATION:**

In accordance with Public Resources Code Section 21065, the Planning Commission's consideration of the Draft EIR is not a project subject to CEQA because it can be seen with certainty that this activity will not cause a physical change in the environment.

#### **NOTICE PROVIDED:**

All meeting noticing requirements were met.

#### **ATTACHMENTS**

Att 1 – Draft Strive San Mateo General Plan 2040  
 Att 2 – Draft Climate Action Plan Technical Update  
 Att 3 – Draft Environmental Impact Report  
 Att 4 – Draft Environmental Impact Report Appendices

#### **STAFF CONTACT**

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# Strive San Mateo

## General Plan 2040

Draft | July 2023





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# VISION AND VALUES









# VISION AND VALUES

The Strive San Mateo General Plan 2040 Vision and Values expresses the community's aspirations for San Mateo for the next 20 years. Developed through a community visioning process, the Vision describes the future of San Mateo as the community would like it to be in 2040 and sets the tone for the entire document. The Values provide direction for decision making as the General Plan is implemented over time and are meant to remind local leaders and City of San Mateo staff of the community's most important ideals. The Vision and Values informed the development of the General Plan goals, policies, and actions. All policies and actions are intended to support the implementation of the Vision and Values.

## VISION

San Mateo is a vibrant, livable, diverse, and healthy community that respects the quality of its neighborhoods, fosters a flourishing economy, is committed to equity, and is a leader in environmental sustainability.

## VALUES

### Diversity

We embrace diversity and respect the experiences, contributions, and aspirations of people of all ages, abilities, incomes, and backgrounds. We celebrate arts and culture.



### Balance

We seek to balance well-designed development and thoughtful preservation with a full spectrum of choices for housing and effective transportation.



### Inclusivity

We strive to include everyone in community life and decisions for a shared, sustainable future.



### Prosperity

We cultivate a diverse and thriving economy with different types of homes, jobs, recreation, lifelong learning opportunities, and services for both current and future generations.



### Resiliency

We are leaders in sustainability, making San Mateo strong and resilient by acting boldly to adapt to a changing world.



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# CHAPTER 1

## Introduction









# INTRODUCTION

## WHAT IS A GENERAL PLAN?

The Strive San Mateo General Plan 2040 is the City's primary tool to guide physical changes in the city. It lays out the community's vision for how San Mateo will look, feel, and change over the next 20 years. The Strive San Mateo General Plan 2040 covers many important topics, including where housing and businesses get built; how people travel around the city; and how to adapt to a changing climate, protect the natural environment, and provide parks and community services. This General Plan also expresses the City's commitment to environmental justice, community engagement, and sustainability.

Every municipality in California is required by State law to adopt and periodically update a general plan that provides a comprehensive, long-range statement of the jurisdiction's land use policies for the coming decades. It must respond to existing conditions on the ground today and anticipate broad, emerging trends that will shape the San Mateo of tomorrow. State law requires that general plans must address many different topics that affect our daily lives, such as housing, land use, transportation, climate change, natural resources, community health and safety, and public services and amenities.

Together with the City's Zoning Code and other related sections of the Municipal Code, the Strive San Mateo General Plan 2040 will serve as the basis for planning and policy-related decisions made by City staff, the City Council, the Planning Commission, and other City boards and commissions. Strive San Mateo General Plan 2040 is also an important reference document for residents and those seeking to develop property in the city since it relays the City's vision for the future of San Mateo.

## WHO MADE THE GENERAL PLAN?

The process to update the 2030 General Plan kicked off in May 2018. At the outset of the project, the City Council appointed a seven-member General Plan Subcommittee (GPS) that was charged with providing feedback and encouraging community participation throughout the Strive San Mateo General Plan 2040 process. The GPS included two City Councilmembers, two Planning Commissioners, and three representatives from other City commissions and the San Mateo-Foster City School District.

Community engagement and feedback was the foundation for each decision point of the Strive San Mateo General Plan 2040 process. Public outreach began in fall 2018 with a series of visioning workshops and community meetings. Over the next four years, the City received input from over 4,000 people or organizations. Outreach activities included:

- Hosting over 20 community meetings, workshops, and open houses virtually and across the city.
- Staffing booths at 20 different community events, such as September Nights on B Street, Movies in the Park, and the Día de los Muertos event at the Martin Luther King Jr. Community Center.
- Offering five online surveys and mapping activities to encourage remote participation.
- Making presentations to numerous community organizations, including neighborhood groups, business associations and major property owners, and local nonprofit groups.

- Holding pop-ups at local businesses, churches, parent group meetings, food distribution centers, bus stops, and various community events.
- Holding over 30 public meetings with the City Council, Planning Commission, and General Plan Subcommittee.

In addition, the Strive San Mateo General Plan 2040 website included online activities and shared information about upcoming meetings and draft documents throughout the process. The online activities allowed community members to provide input without having to attend events in person, which was especially important during the COVID-19 pandemic that limited public gatherings for much of 2020 and into 2021.

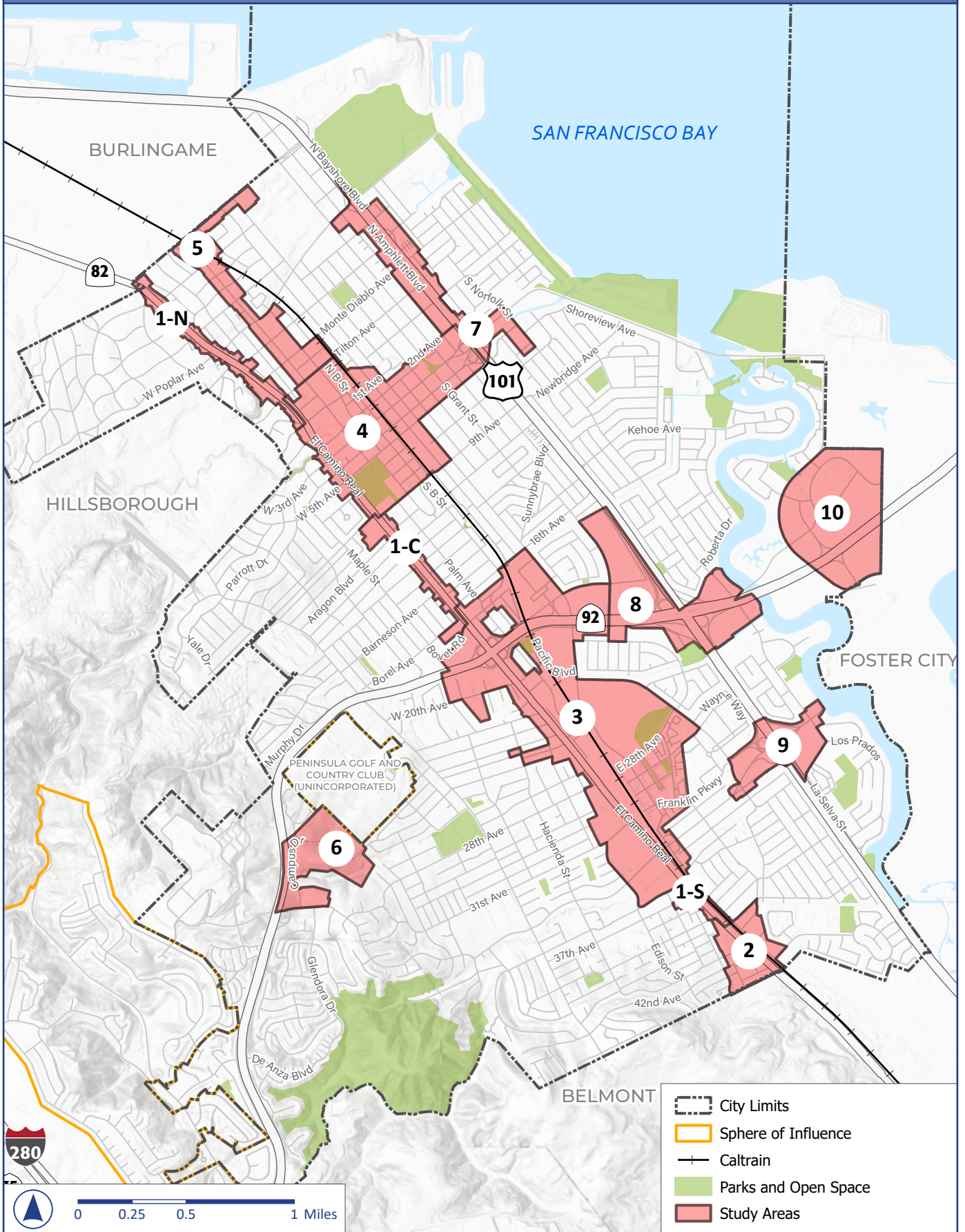
Throughout the Strive San Mateo General Plan 2040 process, the City Council emphasized inclusive outreach to ensure engagement from non-English speakers, renters, residents under the age of 44, low-income households, and underrepresented areas, including the North Shoreview, Shoreview, and North Central neighborhoods, and areas east of US Highway 101. City staff held pop-up events and workshops in the underrepresented neighborhoods and saw an increase in participation from these targeted groups over the course of the process.

Establishing the community's vision and values for San Mateo in 2040 was a first major step of the Strive San Mateo General Plan 2040 preparation process. Between September 2018 and April 2019, hundreds of San Mateo residents provided input on the vision and values for 2040. The City Council finalized the vision statement included as a preamble to this General Plan. The final vision and values statement will guide the implementation of this General Plan over the next 20 years.

Following the visioning phase, the City held community workshops, meetings, and online activities, to identify areas of the city that have the greatest potential to support growth and change over the next 20 years. Ten areas were identified as part of this process, as shown in Figure I-1, and they included the El Camino Real corridor, areas around the three Caltrain stations, and aging and underutilized shopping centers that have potential to transition to other uses. Although the 10 areas reflect the locations where the City anticipates most growth to occur, the Strive San Mateo General Plan 2040 will allow for continued growth outside of these areas based on existing densities, regulations, and State law. The City published an Alternatives Evaluation that analyzed land use and transportation alternatives for these 10 areas in January 2022. After receiving input from the community, General Plan Subcommittee, and Planning Commission, the City Council selected the preferred land use and transportation scenarios in spring 2022.



Figure I-1 Strive San Mateo General Plan 2040 Study Areas



Source: City of San Mateo, 2022; ESRI, 2022; PlaceWorks, 2023.

Note: This map is included for informational purposes and is not adopted as part of this General Plan.





After the alternatives process, the City prepared draft goals, policies, and actions for each Strive San Mateo General Plan 2040 Element. The goals and policies are based on a combination of guidance from the existing General Plan, input from community members and decision makers throughout the process, State and local laws, and best practices in the planning profession. The community, General Plan Subcommittee, Planning Commission, and City Council reviewed the draft policies and actions in a series of public meetings in summer and fall 2022. In addition, the community provided input on the draft policies and actions through an online survey that was active for over two months.

The Strive San Mateo General Plan 2040 team incorporated City Council direction into the draft goals, policies, and actions, and prepared the Draft Strive San Mateo General Plan 2040 for community, General Plan Subcommittee, Planning Commission, and City Council review.

# BIG IDEAS IN STRIVE SAN MATEO'S GENERAL PLAN 2040

The Strive San Mateo General Plan 2040 includes the following big ideas that will guide the next 20 years of San Mateo.



## Balance Growth and Change.

Strive San Mateo General Plan 2040 sets the stage for higher density residential and mixed-use development close to transit and jobs while maintaining existing development patterns in lower density neighborhoods. Allowing a range of housing densities encourages a broad variety of housing types and sizes that fit many different needs, and building new homes near Caltrain and high frequency bus routes helps reduce vehicle miles traveled and greenhouse gas (GHG) emissions.



## Enhance San Mateo's Neighborhood Fabric and Quality of Life.

Strive San Mateo General Plan 2040 promotes context sensitive single-family design, supports neighborhood shopping areas, improves neighborhood walkability and traffic congestion, protects homes, schools, and libraries from excessive noise levels, and provides for a comprehensive network of parks and recreational facilities for all to enjoy.



## Preserve Nature as the Foundation of the City.

Strive San Mateo General Plan 2040 honors San Mateo's natural setting as an irreplaceable asset that is the physical foundation of the community by protecting open space and natural habitat, planting trees, maintaining the City's urban forest, investing in natural infrastructure, preserving natural views and expanding access to parks and open space.



## Encourage All Ways to Travel Around the City.

Strive San Mateo General Plan 2040 supports a multimodal transportation system implemented using a complete streets approach that emphasizes safety and access for walking, bicycling, transit, and driving. By prioritizing mobility options and connectivity for all modes, the General Plan works toward reducing congestion on local streets, vehicle miles traveled and greenhouse gas GHG emissions.



### **Support the Local Economy.**

Strive San Mateo General Plan 2040 focuses on ways to keep jobs and dollars in San Mateo by supporting local shops, businesses, and services. It encourages new businesses that residents need and enjoy, such as restaurants, daycares, medical clinics, gyms, pharmacies, and grocery stores, in convenient locations throughout the community.



### **Address Historic Preservation Holistically.**

Strive San Mateo General Plan 2040 provides a comprehensive blueprint for historic preservation, starting with a citywide historic context statement and Historic Preservation Ordinance update, followed by updates to the historic resources inventory to identify architecturally, culturally, and historically significant buildings, structures, sites, and districts. These efforts will be based on community input and best practices from State and federal agencies, to find the right balance between preservation and other important priorities such as providing new homes.



### **Initiate a Comprehensive Sea Level Rise Strategy.**

Strive San Mateo General Plan 2040 prioritizes development of a climate change adaptation plan that addresses all ongoing efforts, including the work of regional agencies, local jurisdictions, and private property owners, to establish a comprehensive strategy for resiliency and adaptation against sea level rise and flooding.



### **Strengthen Community Outreach.**

Strive San Mateo General Plan 2040 prioritizes extensive community engagement and affirms culturally sensitive outreach methods that encourage early communication and broad representation, such as offering information and materials in the predominant language spoken in the community and scheduling meetings at convenient times and locations for community members.



### **Focus on Equity and Health for all Residents.**

Strive San Mateo General Plan 2040 directs City investment to public improvements that address health and infrastructure disparities in equity priority communities, including the North Central and North Shoreview neighborhoods. City investments will also support active and healthy lifestyles, reducing health disparities around the city, improving access to fresh and health foods, making parks and open space equitably accessible for all residents, and making streets safer and more beautiful.



### **Improve Community Safety Planning and Awareness.**

Strive San Mateo General Plan 2040 establishes clear actions to protect the community from flooding, wildfires and earthquakes by reinforcing the City's emergency readiness and response capabilities, increasing power system resilience, maintaining a state-of-the-art emergency notification system, providing community training programs, and planning ahead for disaster recovery.





## SAN MATEO'S PLANNING CONTEXT

### Setting

San Mateo is in the center of the Peninsula, between the bay and foothills, as shown on Figure I-2. It has the largest population in San Mateo County. San Mateo's vibrant and historic downtown, desirable neighborhoods, diversity of employment options, and high-quality public services make it a popular place to live and work. The city's three Caltrain stations, extensive bicycle and pedestrian network, SamTrans bus service, and well-maintained local roadways make it easy to travel to destinations in the city, along the Peninsula, and beyond.

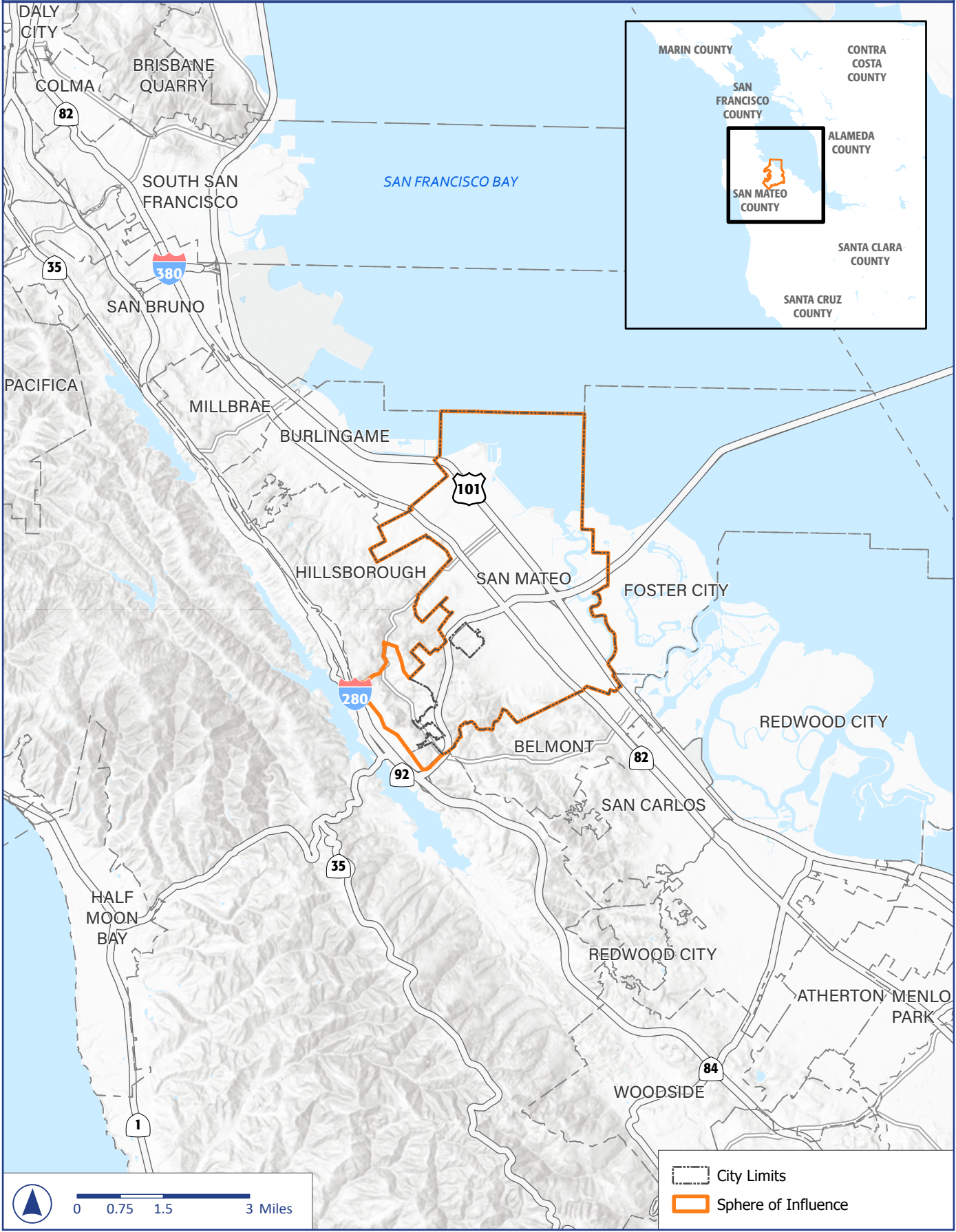
As shown on Figure I-3, residential uses account for the largest amount of land in the city. San Mateo also has a wide range of uses, including offices; commercial uses, such as shops and restaurants; and high-tech and light-industrial areas. Parks, open space, and private recreation make up most of the remaining land in the city, along with public facilities and quasi-public uses. There is only a small amount of vacant land in the city. Major new development in San Mateo is primarily concentrated around the three Caltrain stations (in the Downtown, Hayward Park, and Hillsdale areas) and along El Camino Real. Given San Mateo's central location on the Peninsula, the city functions as a crossroads for regional travel routes. The San Mateo-Hayward Bridge links San Mateo and other Peninsula communities to the East Bay. US Highway 101, State Route (SR-) 92, and El Camino Real (SR-82) all pass through San Mateo, and Interstate 280 passes just west of the City Limits. Traffic congestion from these regional roadways regularly spills over to local city streets.

### Community Profile

At the time of the creation of the Strive San Mateo General Plan 2040, the population in San Mateo was about 102,200 people from a diverse range of racial and ethnic backgrounds, as shown in Table I-1. The working-age population cohort, those aged 20 to 64, represented the largest population segment in the city. About half of San Mateo residents aged 25 years or older hold at least a bachelor's degree, as compared to about a third of California residents. The relatively high level of educational achievement among city residents meant that many were qualified for technology and innovation economy job opportunities. As a result of their high educational attainment and employability in high-income, high-growth fields, many residents' average earnings were also relatively high compared with the region and state medians.



Figure I-2 Regional Context



Source: ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.



However, there are also many members of the San Mateo community who aren't reflected in these average statistics. Vulnerable populations in San Mateo include children, seniors living alone, families living in overcrowded households, unhoused people, low-income households and households in poverty, people with disabilities, non-English speakers, and people without a car. Strive San Mateo General Plan 2040 includes policies and actions aimed at improving the quality of life for all of the people that live in San Mateo, including vulnerable populations.

**Figure I-3 Proportions of Existing Land Use in San Mateo**

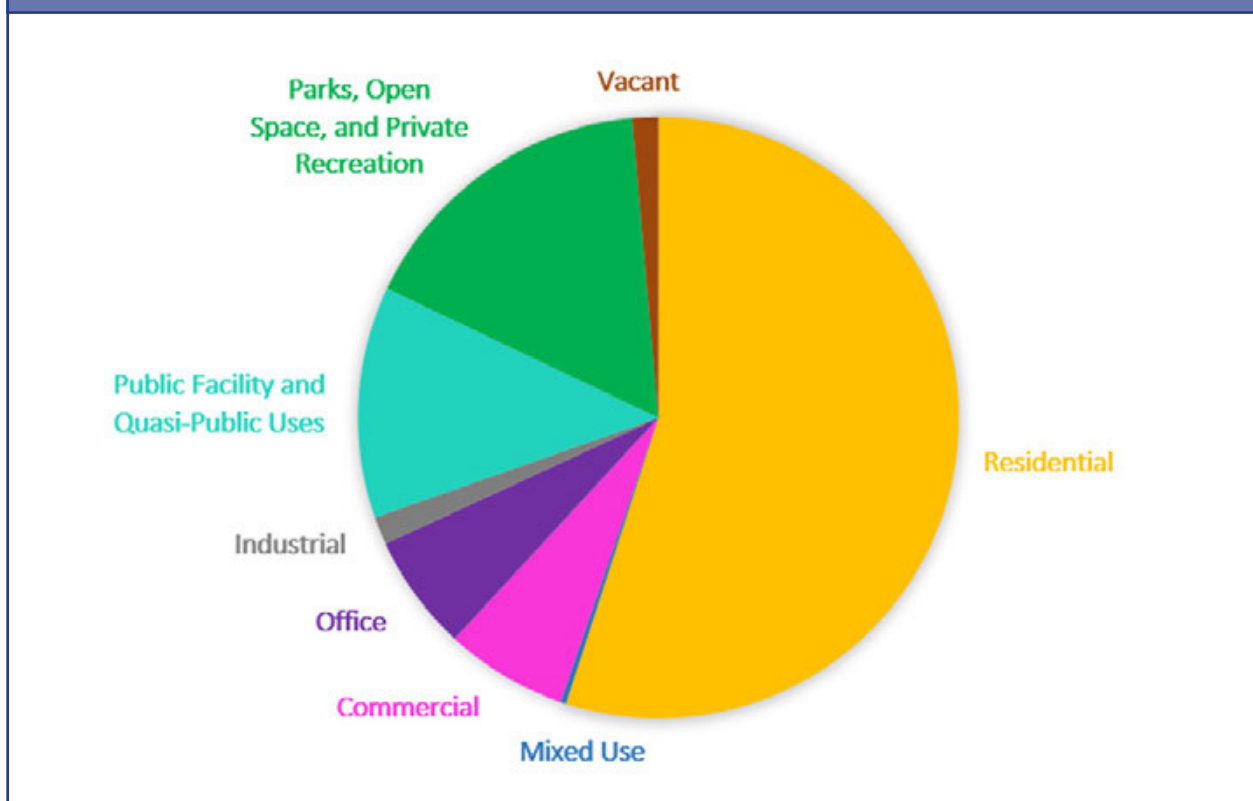


Table I-1 Race and Hispanic Origin	
White alone	48.6%
Black or African American alone <sup>a</sup>	1.9%
American Indian and Alaska Native alone <sup>a</sup>	0.8%
Asian alone <sup>a</sup>	25.5%
Native Hawaiian and Other Pacific Islander alone <sup>a</sup>	1.8%
Two or More Races	9.2%
Hispanic or Latino <sup>b</sup>	24.1%
White alone, not Hispanic or Latino	40.9%

<sup>a</sup> Includes persons reporting only one race

<sup>b</sup> People of Hispanic or Latino origin may be of any race, so also are included in applicable race categories

Source: US Census Bureau, 2021 American Community Survey (ACS), 5-year estimates. <https://www.census.gov/quickfacts/sanmateocitycalifornia>

## ECONOMIC PROFILE

San Mateo's economy has been strongly influenced by the strength of Silicon Valley technology companies and the city's prime geographic location. Many of the major employers in San Mateo are public agencies, such as the County Medical Center, County Environmental Health Services, local public schools and college districts, County Behavioral Health, and the City of San Mateo. The largest employers in the private sector include the entertainment and electronics conglomerate Sony, Franklin Templeton Investors, and the internet services company Rakuten.

San Mateo will continue to be attractive to office and other commercial development because of its unique location between the technology industry in San Mateo and Santa Clara Counties and downtown San Francisco, proximity to San Francisco Airport, accessibility to the East Bay via the San Mateo-Hayward Bridge, and the capacity of Caltrain and regional freeways to accommodate additional growth.

Jobs-housing balance is a measure that can help inform how well the local economy provides jobs for the local labor force. An adequate balance of jobs and housing can benefit the city's economy, environment, and quality of life for residents. Although this topic is often described as "jobs-housing" balance, comparing the number of jobs to the number of residents is a more direct comparison of individuals, rather than comparing people to homes. While the City cannot control whether jobs within San Mateo are filled by residents, striving for a balanced jobs-to-employed residents ratio increases the opportunity for employed residents to find a job in San Mateo. When the number of employed residents is significantly higher or lower than the number of jobs in the city, it can lead to increased traffic congestion as workers commute either in or out, which in turn creates increased air pollution, noise, and GHG emissions.



Theoretically, an ideal jobs-to-employed residents ratio for a city like San Mateo would be 1.0, which would indicate that there is a job in the community for every employed resident. It should be noted that the ratio of jobs to employed residents indicates a numerical match, not a qualitative match in job type vs. resident skills and abilities. Even with an ideal jobs-to-employed residents ratio of 1.0, many residents will continue to commute outside of San Mateo while workers that do not reside in San Mateo will continue to commute in. Nevertheless, the Strive San Mateo General Plan 2040 is an opportunity for the City to enact policies that help to balance the amount and type of new jobs and new housing in the community and to maintain a balance between employment income levels and housing costs within the city, striving for a goal of one job for each employed resident.





## FUTURE GROWTH AND PROJECTED TRENDS

The City of San Mateo can reasonably assume the city will continue to grow, and that there will be a need to designate land for a range of uses to accommodate that growth. Strive San Mateo General Plan 2040 sets the foundation for future growth that is logical, orderly, and achieves the community's vision of San Mateo as a place that is vibrant, livable, diverse, and healthy.

Although San Mateo is largely “built out,” California law requires cities to plan for housing to accommodate a range of households and income levels. The Association of Bay Area Governments (ABAG) – the regional planning agency for the Bay Area – assigns a State-mandated Regional Housing Needs Allocation (RHNA) to each jurisdiction. The RHNA is the number of new housing units the City needs to accommodate for every eight-year Housing Element cycle. Every jurisdiction, including San Mateo, must show how it can accommodate its RHNA in the Housing Element by designating and zoning land for new homes. Although the RHNA is not a direct requirement to build units, the State has stringent requirements on cities to ensure they are doing everything possible for housing to be built and to remove common barriers to housing construction. The legal consequences of not allowing for new housing development can be severe. Strive San Mateo General Plan 2040 will cover three Housing Element cycles: the 6th (January 2023 to January 2031), 7th (January 2031 to January 2039), and part of the 8th (January 2039 to January 2047). Although the scale of future RHNA is unknown, the Strive San Mateo General Plan 2040 Land Use Map was designed to anticipate sufficient housing capacity for the Housing Element cycles between now and 2040.

Strive San Mateo General Plan 2040 was prepared as the City, nation, and world continued to address the COVID-19 pandemic, an unprecedented public health crisis. Research for this General Plan was completed as the Bay Area, generally, appeared to be emerging from the worst of it. The COVID-19 pandemic accelerated trends relating to the demand for office and commercial uses (e.g., gig economy, remote work, online shopping). During this time, some companies shifted towards open floor plans, shared workstations, and flexible work hours/locations. While the economic implications and future trends resulting from the pandemic may still not be fully known, it is anticipated that the demand for technology and innovation economy jobs will continue to grow through the year 2040 in San Mateo and the broader Peninsula region.

In the coming years, it is also anticipated that the sharing and electrification of vehicles will continue to increase. How people travel could also continue to change as mobile phone technologies and private transportation services expand, which may result in less need for parking in San Mateo. The COVID-19 pandemic that began in 2020 initiated a significant trend of remote work for office workers and corresponding changes in commutes and office space demand; however, there will continue to be a need for office space as employers and workers see value in face-to-face work. In addition, other types of work, such as medical treatment or research and development in a lab environment, cannot feasibly happen from home. Many people will want to live in areas that are close to their jobs and have multiple transportation options. Strive San Mateo General Plan 2040 was prepared with consideration of these projected trends.

## USER'S GUIDE

Strive San Mateo General Plan 2040 is for all members of the community and anyone interested in the future of the city. It was crafted with a constant eye toward keeping it useful, clear, and easy to understand. The following section provides an overview of the elements; describes the planning context for San Mateo; explains what a goal, policy, and action is in the context of the General Plan; and defines major themes integrated throughout the General Plan.

### Overview of the Elements

State law requires that general plans contain eight mandatory sections, or “elements.” The State provides considerable flexibility in how these elements are organized. Table I-2 shows the State-mandated elements and their counterparts in the Strive San Mateo General Plan 2040. This General Plan addresses all the topics required by State law but has tailored the organization to reflect the local context. It also includes other topics that are not required by State law, but that community members have identified as being fundamental to the quality of life in the city. Once adopted, the optional elements have the same legal status as the mandatory elements. No single element or subject supersedes any other, and all elements must be internally consistent; policies and actions must complement one another across topic areas without conflicting.

Table I-2 State-Mandated and Strive San Mateo General Plan 2040 Elements	
State-Mandated Element	Strive San Mateo General Plan 2040 Element
Land Use	Land Use Element
Circulation	Circulation Element
Housing	Housing Element (adopted separately)
Open Space	Conservation, Open Space, and Recreation Element
Conservation	
Safety	Safety Element
Noise	Noise Element
Environmental Justice	Land Use Element Also incorporated in other elements
Optional Elements	
	Public Services and Facilities Element
	Community Design and Historic Resources Element

A brief description of each General Plan element is provided below:

- The **Land Use Element** provides guidance for the future use and development of land, and also addresses environmental justice issues, community engagement, climate change and sustainability, regional cooperation, economic development, and development review.
- The **Circulation Element** provides guidance to help design a sustainable and comprehensive transportation system that is safe and accessible for all users and modes of travel.
- The **Housing Element** provides policies and programs to ensure that San Mateo can accommodate housing for all members of the community at all income levels.
- The **Community Design and Historic Resources Element** guides the development and physical form of San Mateo from the individual neighborhood scale to the overall cityscape and includes actions to support preservation of the City’s historic resources.
- The **Conservation, Open Space, and Recreation Element** provides guidance for the development, management, and preservation of San Mateo’s natural, cultural, and recreational resources.
- The **Public Services and Facilities Element** addresses public facility and infrastructure needs, such as community safety, water supply, sewer and storm drainage, energy supply, childcare and schools, healthcare and social services, and solid waste.
- The **Safety Element** provides guidance to help protect the community and mitigate potential impacts from natural and human-caused hazards, such as flooding, sea level rise, wildfires, seismic and geotechnical hazards, and hazardous materials. This element also covers emergency preparedness.
- The **Noise Element** provides guidance to protect the community from excessive noise exposure.

The General Plan includes a **Glossary** to aid in understanding technical terminology used in the document.

## Planning Boundaries

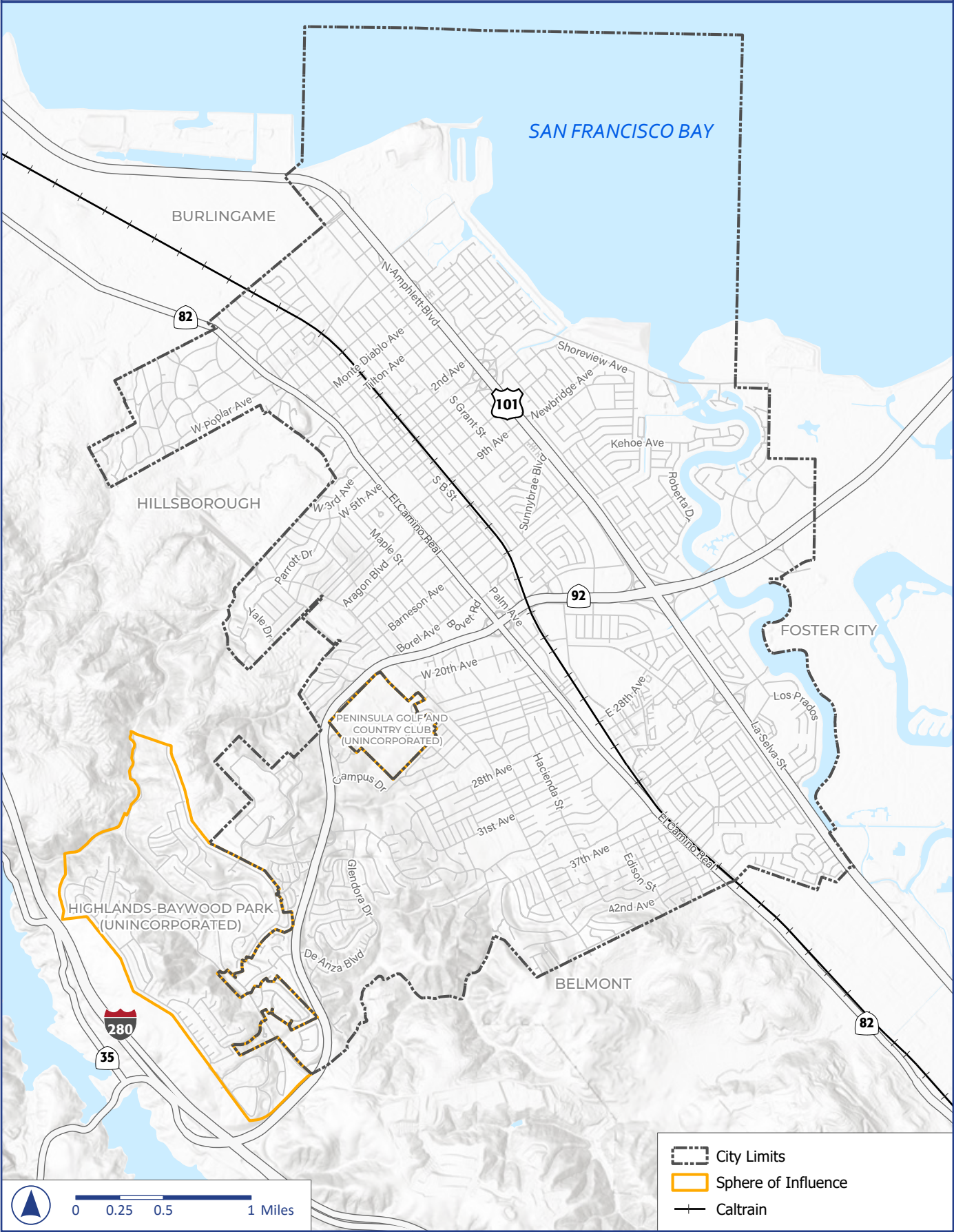
The Strive San Mateo General Plan 2040 considers land within the City Limits as well as surrounding land the City may annex in the future, known as the Sphere of Influence (SOI). Determined in conjunction with the San Mateo County Local Agency Formation Commission (LAFCO), the SOI is the area that could be provided with City services in the future and can therefore be considered as a potential future boundary of San Mateo. The City Limits boundary encompasses the land over which the City of San Mateo has jurisdictional authority. Together, the City Limits and the SOI shown in Figure I-4 comprise the Planning Area for San Mateo.

## Goals, Policies, and Actions

Strive San Mateo General Plan 2040 is built around a series of goals, policies, and actions that describe what needs to be done to achieve the community’s vision for the future. Goals are end-statements; they describe what the community wants to accomplish to resolve a particular issue or problem. Policies and actions guide day-to-day decision making so that there will be continuing progress toward the attainment of goals. Many goals will be implemented by both policies and actions.



Figure I-4 San Mateo Planning Area





### **The State Law Defines Environmental Justice as:**

*The fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.*  
(Government Code Section 65040.12(e)(1)).



The goal, policy, and action terms are defined as follows.

- **Goal:** A description of the general desired result that the City seeks to create through the implementation of the General Plan. Each goal has one or more policies and/or actions associated with the goal.
- **Policy:** A specific statement that regulates activities in the city, guides decision making, and directs ongoing efforts as the City works to achieve a goal. General Plan policies establish standards that will be used by City staff, Planning Commission, and City Council when prioritizing initiatives and expenditures, reviewing and approving new development, and in related City decision making.
- **Action:** A measure, procedure, or technique intended to help reach a specified goal or implement one or more policies. The actions in the General Plan will serve as a to-do list for City staff and officials to implement the goals and policies of the General Plan.

The placement of a goal, policy, or action in a specific element does not limit its scope to only that element topic. For example, a policy in the Circulation Element can apply to topics beyond the realm of transportation. Similarly, there is not a one-to-one correspondence between policies and actions. An individual action can implement more than one policy and can contribute to achieving multiple goals across different elements.

The graphic later in this chapter explains the goals, policies, and actions numbering in the General Plan.

## **Equity Priority Communities**

Throughout California, low-income communities and communities of color have experienced a combination of historic discrimination, negligence, and political and economic disempowerment, with the result that today, they are struggling with both a disproportionate burden of pollution and health impacts, as well as disproportionate social and economic disadvantages, such as poverty or housing instability. Environmental justice is the idea that planning and environmental policies should treat people of all races, cultures, and incomes fairly and equitably. Senate Bill (SB) 1000, the Planning for Healthy Communities Act, requires that General Plans address environmental justice for communities disproportionately burdened by pollution within San Mateo.

## **Identifying Equity Priority Communities**

Figure I-5 shows the communities in San Mateo that are disproportionately burdened by environmental pollution: North Central and North Shoreview/Shoreview. These areas are called “Equity Priority Communities” throughout this General Plan. This area was mapped using local knowledge and California Communities Environmental Health Screening Tool (CalEnviroScreen), a tool

## Sustainability, Environmental Justice, and Community Engagement

Strive San Mateo General Plan 2040 goes beyond the minimum State requirements and embodies three key themes: sustainability, environmental justice, and community engagement. These themes are interrelated and woven throughout Strive San Mateo General Plan 2040. Policies and actions in each element that relate to each of these themes are marked with a corresponding icon, as shown below.

The specific themes of Strive San Mateo General Plan 2040 include:



**Sustainability.** Sustainability means ensuring that San Mateo can meet its current needs and leave viable resources for future generations. The sustainability policies and actions aim to improve resiliency, especially to the impacts of climate change, and to protect the environment, reduce pollution, water and energy use, and enhance overall quality of life. Strive San Mateo General Plan 2040 also emphasizes sustainable modes of transportation to help lower pollution and GHG emissions, such as walking, bicycling, and taking transit.



**Environmental Justice.** Environmental justice policies and actions intend to reduce the unique or compounded health risks in the neighborhoods in the city that experience the highest levels of pollution and negative health outcomes, such as asthma and low birth weight babies, as well as the greatest social and economic disadvantages, such as poverty and housing instability. Strive San Mateo General Plan 2040 uses the term equity priority community for these neighborhoods and focuses on improving environmental justice and public health for the people who live in these communities by promoting meaningful community engagement and prioritizing improvements that address their needs.



**Community Engagement.** Providing support for increased community participation in the planning and development processes is another important theme of Strive San Mateo General Plan 2040. Residents in San Mateo may face barriers when participating in the community engagement process. Strive San Mateo General Plan 2040 aims to engage all residents and stakeholders on all matters of development, growth, and public policy in ways that are inclusive, equitable, and give everyone an opportunity to participate in the process.

developed by the State Office of Environmental Health Hazard Assessment on behalf of the California Environmental Protection Agency. CalEnviroScreen measures pollution and population characteristics using 21 indicators, such as air quality, hazardous waste sites, asthma rates, and poverty. It applies a formula to each Census tract in the state to generate a score that ranks the level of cumulative impacts in each area relative to the rest of the Census tracts in the state. A Census tract with a higher score is one that experiences higher pollution burdens and social or health vulnerabilities than Census tracts with lower scores. In addition to using CalEnviroScreen as a tool for identifying equity priority communities, SB 1000 encourages local agencies to work with community members and stakeholders to consider the available data from other sources, including the lived experience of community members, to refine the boundaries of equity priority communities and identify additional communities, if appropriate, to support planning efforts to improve environmental justice.

Using local knowledge and CalEnviroScreen, the City identified two equity priority communities per the data available as of December 2022: North Central and North Shoreview/Shoreview. Environmental justice issues in each community are described in more detail in the pages that follow. It is important to note that the State regularly updates CalEnviroScreen, and new data sources may become available. The equity priority communities mapped in this General Plan may change as conditions change.



## Example Goals and Policies Page

**Goal Numbering:** Each goal number starts with the element acronym and is followed by the number of the goal. (e.g., C 1 = Circulation Element, first goal)

**Policy and Action Numbering:** The policy or action number has two parts: first, the number of the goal it supports, and second, the sequential number of the policy or action in the order underneath that goal. (e.g., C 1.4 = Circulation Element, first goal, fourth policy or action)

**Icons:** Policies and actions related to the three themes of the General Plan – sustainability, environmental justice, and community engagement – are identified using these icons. A policy or action can respond to more than one theme, so multiple icons may be applied.

Chapter 9
Noise Element

### GOALS, POLICIES, AND ACTIONS

**GOAL N-1** Protect noise sensitive land uses from excessive noise levels.


#### POLICIES

**Policy N 1.1** **Noise and Land Use Planning.** Integrate noise considerations into land use planning decisions to minimize noise impacts to or from new development.

**Policy N 1.2** **Interior Noise Level Standard.** Require submittal of an acoustical analysis and interior noise insulation for all noise sensitive land uses listed in Table N-1 that have an exterior noise level of 60 dBA ( $L_{eq}$ ) or above, as shown on Figure N-2. The maximum interior noise level shall not exceed 45 dBA ( $L_{eq}$ ) in any habitable rooms, as established by the California Building Code.

**Policy N 1.3** **Exterior Noise Level Standard for Residential Uses.** Require an acoustical analysis for new multi-family common open space for residents that have an exterior noise level of 60 dBA ( $L_{eq}$ ) or above, as shown on Figure N-2. Incorporate necessary mitigation measures into residential project design to minimize common open space noise levels. Maximum exterior noise should not exceed 65 dBA ( $L_{eq}$ ) for residential uses and should not exceed 65 dBA ( $L_{eq}$ ) for public park uses.

**Policy N 1.4** **Exterior Noise Level Standard for Parks and Playgrounds.** Require a feasibility analysis of noise-reduction measures for public parks and play areas that have an exterior noise level of 70 dBA ( $L_{eq}$ ) or above.

 **Policy N 1.5** **Inclusive Outreach.** Notify the community when new land uses that would result in excessive noise levels are being considered and inform community members about how they can engage in the process. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.

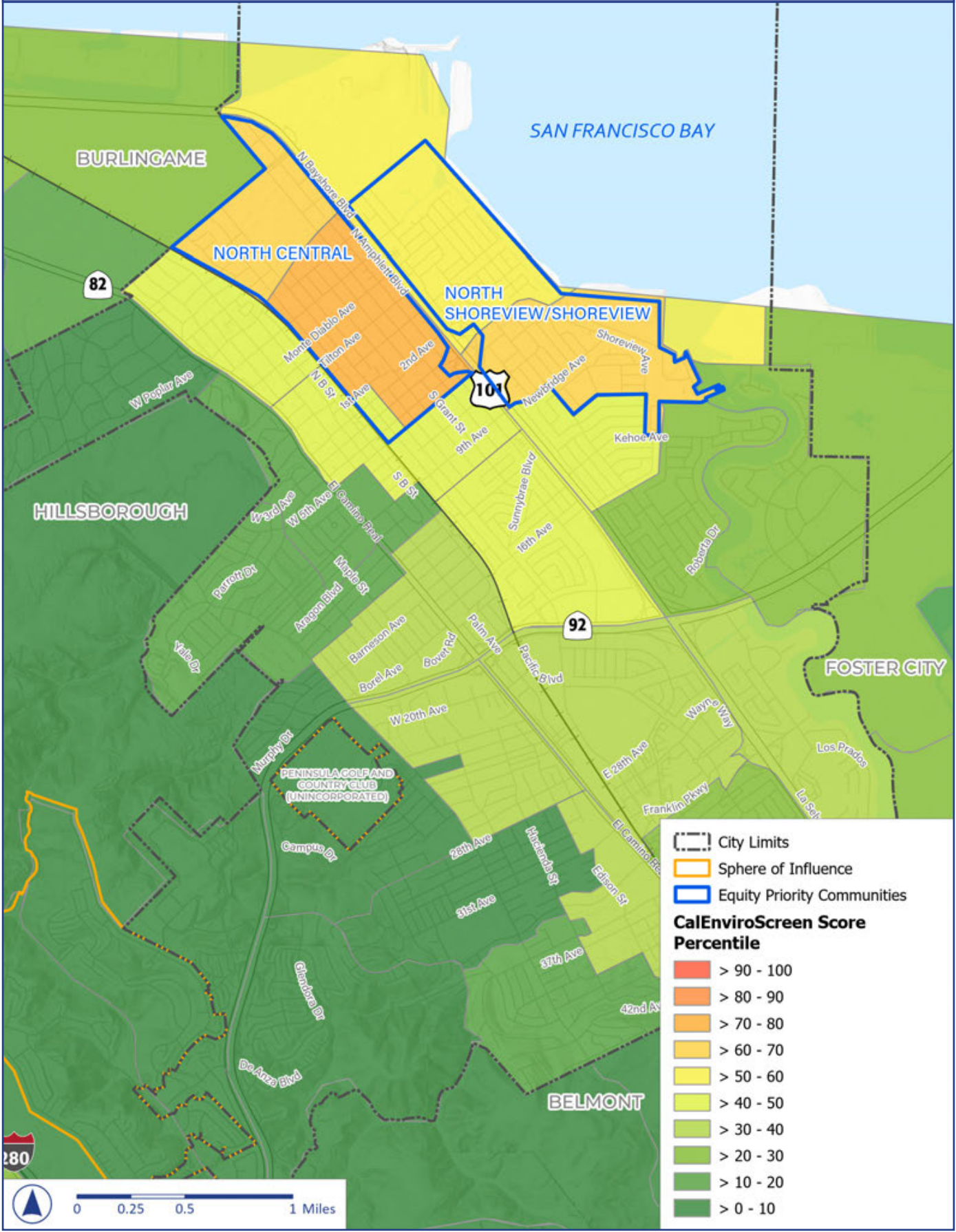
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### North Central and North Shoreview/Shoreview

There are three Census tracts that encompass the North Central Equity Priority Community: 6000, 6200, and 6300. After reviewing the CalEnviroScreen data, the City defined the boundary for the North Central Equity Priority Community based on local knowledge of the neighborhood to focus on the residential areas within the Census tract. Two Census tracts encompass the North Shoreview/Shoreview Equity Priority Community: 6100 and 7701. After reviewing the CalEnviroScreen data, the City also refined the boundary for the North Shoreview/Shoreview Equity Priority Community based on their local knowledge of the neighborhood. Figures I-7 and I-8 show the CalEnviroScreen score by Census tract within the North Central Equity Priority Community for the 21 pollution and population indicators. As shown in Figure I-5, Census tract 6200, which encompasses most of North Central, received a score over the 75th percentile for traffic, diesel particulate matter, impaired water, groundwater threats, hazardous waste, lead in housing, linguistic isolation, education, and poverty. Census tract 6000, in the northern area of the boundary, received a score over the 75th percentile for traffic, diesel particulate matter, impaired water, groundwater threats, and linguistic isolation. Census tract 6300, which covers a small portion of North Central, received a score over the 75th percentile for traffic, diesel particulate matter, impaired water, groundwater threats, and hazardous waste.



Figure I-5 Equity Priority Communities



Source: California OEHHA, 2021; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.



Figures I-6 and I-7 show the CalEnviroScreen score by Census tract within the North Shoreview/Shoreview equity priority community for the 21 pollution and population indicators. As shown in Figure I-6, Census tract 6100, which encompasses a large area of North Shoreview/Shoreview, received a score over the 75th percentile for traffic, impaired water, groundwater threats, lead in housing, poverty, education, and linguistic isolation. Census tract 7701, in the southern area of North Shoreview/Shoreview, received a score over the 75th percentile for traffic, impaired water, lead in housing, and unemployment.

North Central and North Shoreview/Shoreview received a high score for traffic. Both communities are near US Highway 101, one of the roadways that carries the highest amounts of traffic in San Mateo. North Central is also near El Camino Real, which is another roadway that carries a high amount of traffic. The amount of traffic and vehicles on the road directly impacts the amount of pollution in the air. Exposure to air pollution is associated with a variety of negative health outcomes, including reduced lung function, pneumonia, asthma, cardiovascular diseases, and premature death. It may also affect lung cancer rates. North Central also received a high score for diesel particulate matter, which is a harmful type of pollutant that comes from exhaust from trucks, buses, and other motorized vehicles that use diesel engines and may travel on US Highway 101 or city streets.

Impaired waters are also a concern in North Central and in part of North Shoreview/Shoreview. A 2012 report from the State Water Resources Control Board found that the San Mateo Creek, which runs through North Central and North Shoreview/Shoreview, is an impaired water, as defined by Section 303(d) of the federal Clean Water Act. Impaired waters have contaminants that do not meet water quality standards. Contaminated waterways can impact equity priority communities if residents come in contact with contaminated water by interacting with the creek or during a flooding event.

Residents in North Central and North Shoreview/Shoreview may live in older homes that were built prior to the adoption of building standards that prohibited the use of lead-based paint. Lead in housing ranked high as a toxin of concern in part of North Central and in North Shoreview/Shoreview. The California Building Standards Code was created in 1978. Approximately 73 percent of the homes in San Mateo were built before 1979, which increases the chances that lead can be found in these houses. Exposure to lead can

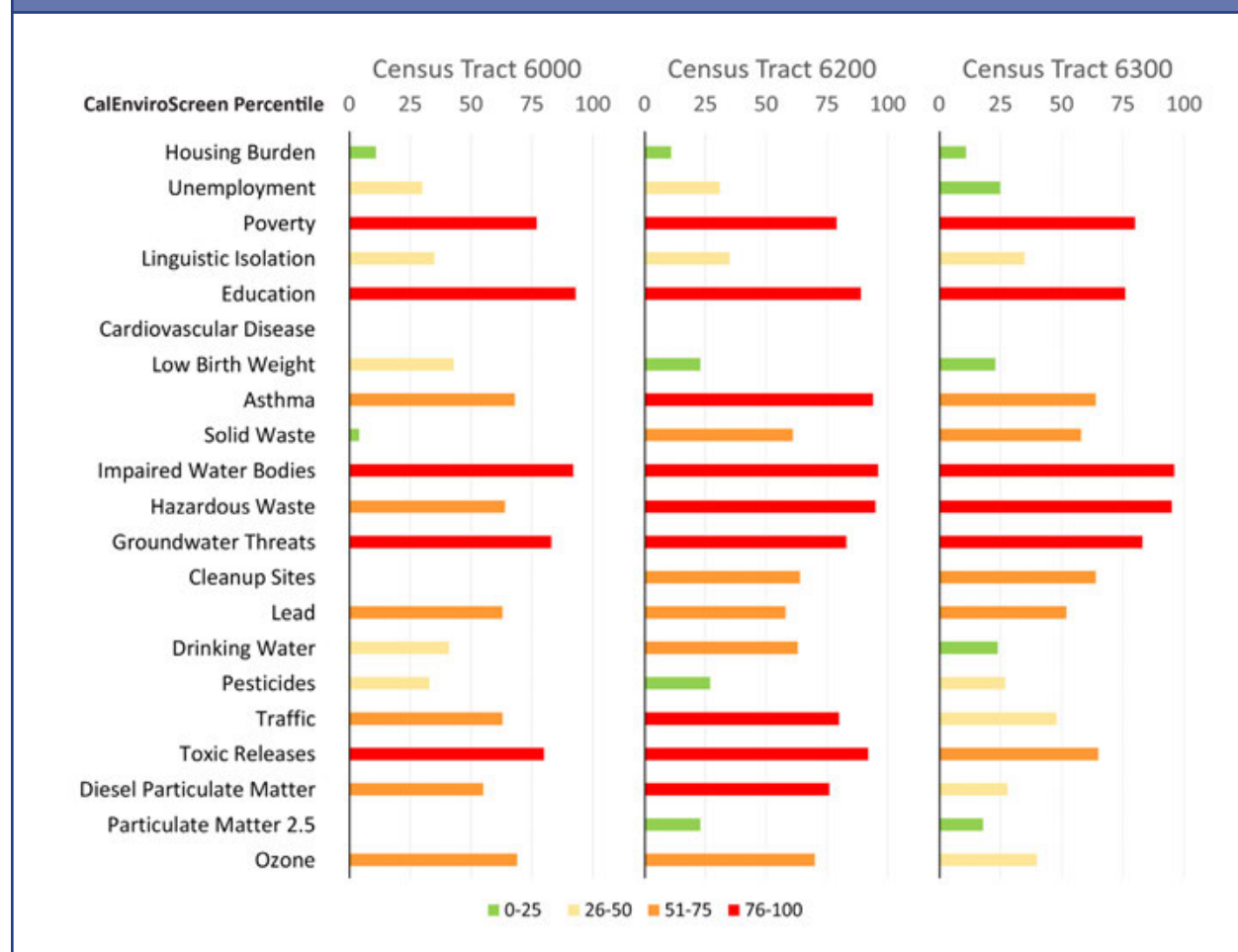


result in negative health impacts for children, such as slowed development and growth, learning difficulties, and hearing or speech problems.

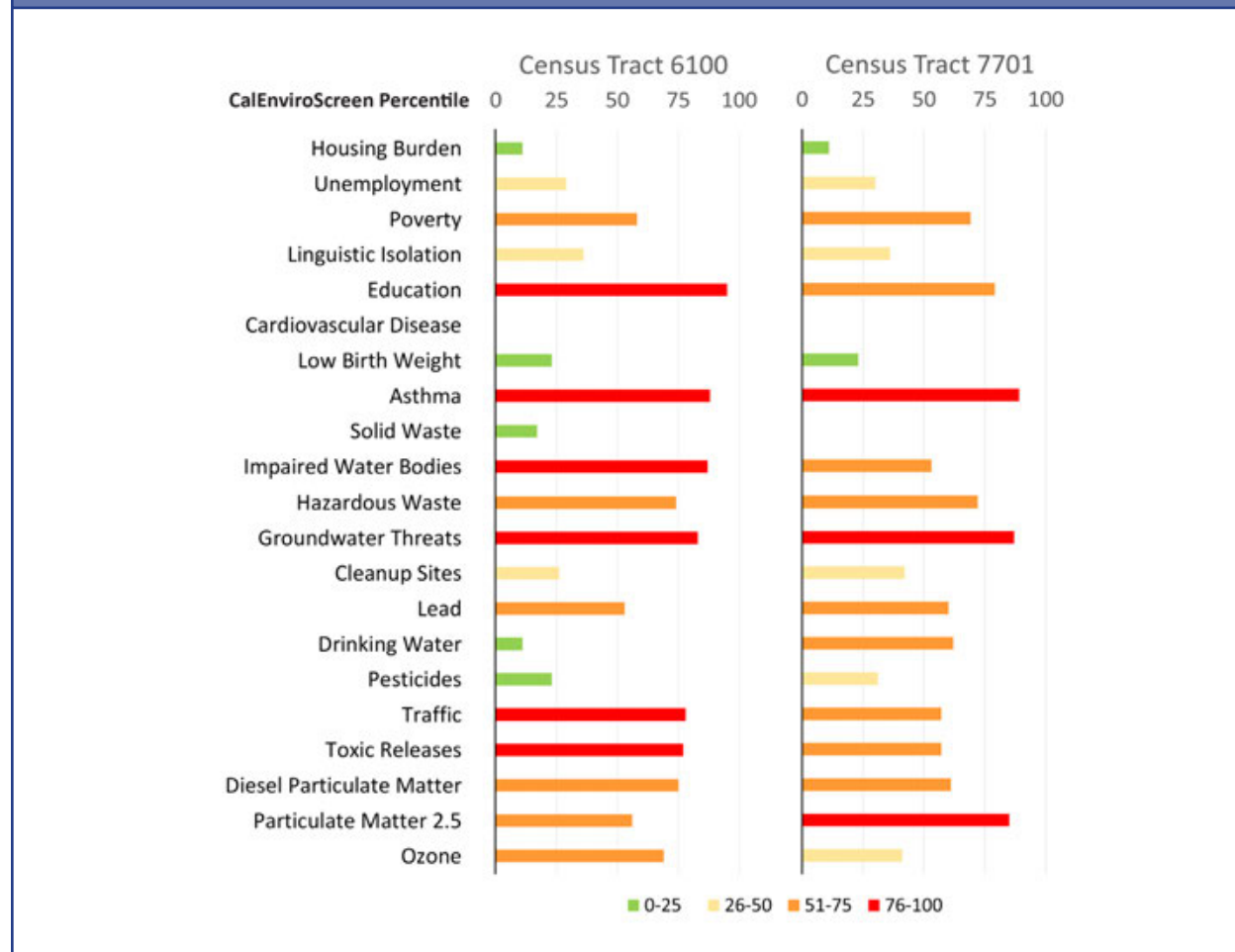
Most of North Central and part of North Shoreview/Shoreview ranked high in linguistic isolation, which means there are individuals in these communities that mainly speak another language, which may be Spanish, Mandarin or Cantonese, Tagalog, or another language. Barriers in communication can prevent people from participating in the planning process or may limit the amount of information that is available during an emergency. Data also indicated that some North Central and North Shoreview/Shoreview residents could be living below the federal poverty level and/or did not receive education beyond high school. There may also be people in the North Shoreview/Shoreview community that are over the age of 16 and are unemployed.

Hazardous waste materials, sites, or facilities that could emit toxins into the air, water, and soil that are harmful to people are present in North Central. California's Department of Toxic Substances Control tracks hazardous waste facilities and sites. As of January 23, 2023, the Department of Toxic Substances Control's data management system shows there is an active case at the College Park Elementary School that could pose a threat to public health.

**Figure I-6 Equity Priority Communities – North Central**





**Figure I-7 Equity Priority Communities – North Shoreview/Shoreview**

## Equity Priority Communities in Strive San Mateo General Plan 2040

Strive San Mateo General Plan 2040 must include policies and actions that will lead to an equitable distribution of resources and opportunities and will reduce the impacts of environmental hazards in the equity priority communities mentioned previously, or in other equity priority communities that are identified during the life of the General Plan. State law allows cities and counties to address environmental justice either by adopting a stand-alone Environmental Justice Element or by incorporating environmental justice goals, policies, and actions into other elements. Strive San Mateo General Plan 2040 takes the approach of incorporating environmental justice goals, policies, and actions into its other elements. In addition to policies and actions that the City will implement through this General Plan and other City plans, other agencies and organizations, such as San Mateo County, nonprofits, and religious groups also provide resources and help improve outcomes in equity priority communities.

# IMPLEMENTING STRIVE SAN MATEO GENERAL PLAN 2040

Long-range planning in San Mateo does not end with the adoption of this document. To achieve the community's vision, decisions about development projects, capital improvements, subdivision maps, specific plans, and other plans and policies affecting land use, transportation, and the physical environment will need to be consistent with Strive San Mateo General Plan 2040.

## Implementation Strategy

To complement the implementation of Strive San Mateo General Plan 2040, the City will identify a list of implementation programs to help achieve the goals, policies, and actions identified in each element. The implementation plan will be prepared after General Plan adoption and will describe and prioritize the timing, responsible City department, cost range, and actions to implement various aspects of Strive San Mateo General Plan 2040. Some programs may already be budgeted and ongoing, while the City Council will need to identify resources during future budget cycles to implement other programs.

## Relationship to the Zoning Ordinance and Other Plans

The General Plan establishes a broad vision and framework for land use in San Mateo and provides policies and actions to manage development through 2040. San Mateo's Zoning Code implements the General Plan with specific standards that regulate land uses and how and where they can be developed. The two must be consistent. Therefore, when the General Plan is amended, the Zoning Code must be amended to retain consistency with the General Plan. Other Municipal Code sections, specific plans, and City planning documents must also be amended as needed to retain consistency with the General Plan.

## Amending the Plan

Strive San Mateo General Plan 2040 provides long-range and comprehensive guidance to the City, but the process of growth and change is dynamic and often unpredictable. For these reasons, the City needs to monitor progress in achieving the major goals of the plan, periodically adjusting policy guidance as needed to advance those goals in light of contextual changes that may happen over the next 20 years. The City may need to revise portions of the General Plan to reflect land use map changes spurred by land use and development activity, changes in community values or the county's physical or economic conditions, or refinements to improve progress towards achieving the major goals of the General Plan. While some amendments change the land use designation of a particular property, any part of the General Plan may be amended as circumstances change.

Amendments to the General Plan may be initiated by an individual, organization, or the City, depending on the nature of the proposal. The Planning Commission reviews and provides recommendations to the City Council for all proposed General Plan amendments. The City Council then takes final action on all General Plan amendment requests. All amendments require public hearings by the Planning Commission and City Council and evaluation of the potential impacts to San Mateo's physical environment, in accordance with the California Environmental Quality Act (CEQA).

While it is appropriate to revise the General Plan as conditions change in San Mateo, the goals and major themes of the plan are expected to endure for the life of the plan.

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# CHAPTER 2

## Land Use Element









# LAND USE ELEMENT

## INTRODUCTION

The Land Use Element sets the foundation for future growth, change, and preservation in San Mateo and serves as the blueprint for the development of public and private property in the city. The Element seeks to balance well-designed development and thoughtful preservation with a full spectrum of choices for housing, while also cultivating a diverse economy and supporting resiliency. It includes goals, policies, and actions that support the equitable health and well-being of all neighborhoods in San Mateo and all members of the community. It also encourages a diverse range of land uses to meet the needs of the community, including housing, parks, open space, recreation, retail, commercial services, offices, and industrial.

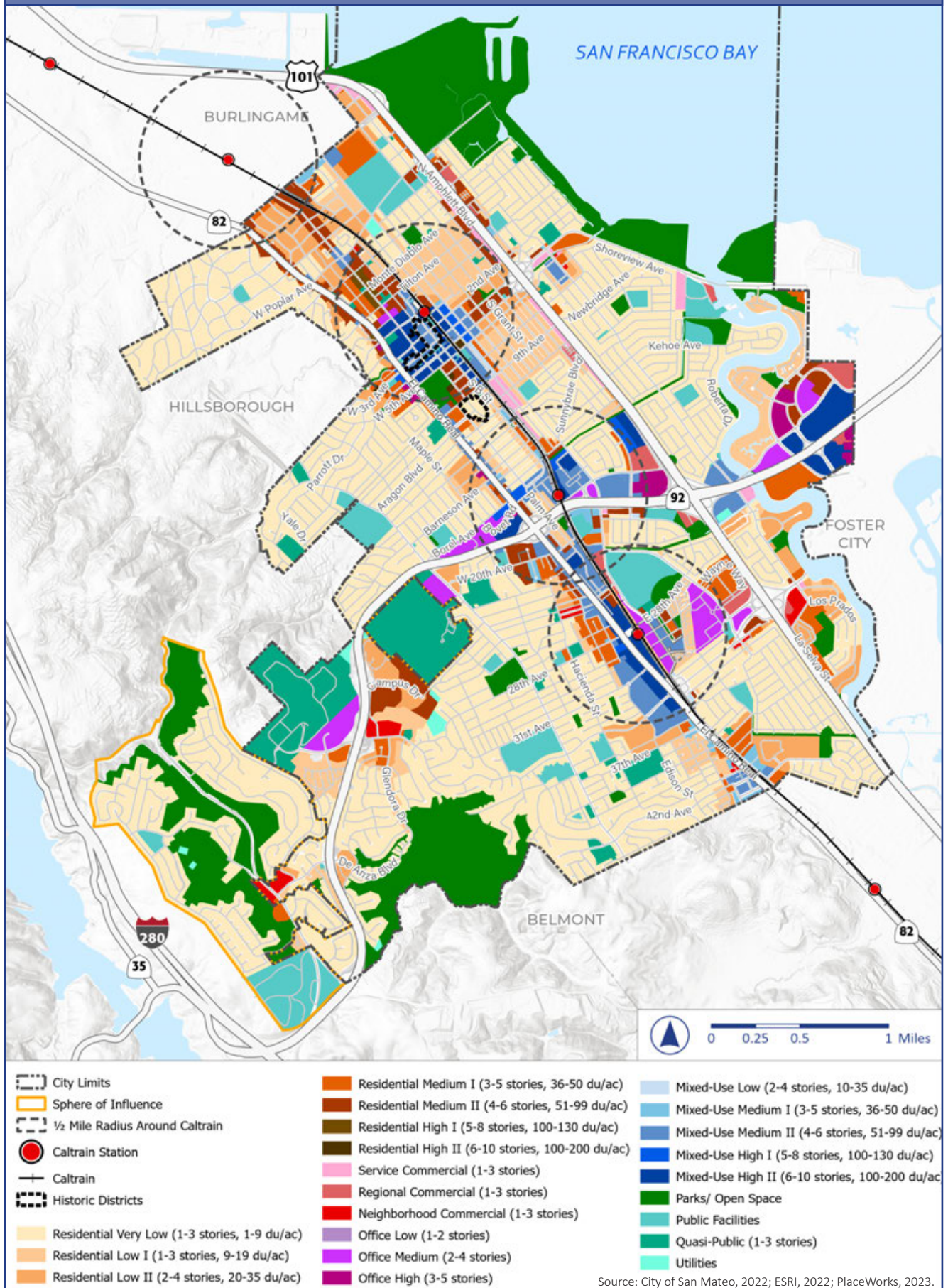
This element meets the State-mandated requirements for a Land Use Element. It defines categories for the location and type of public and private uses of land under the City's jurisdiction; it recommends standards for density on land covered by the Strive San Mateo General Plan 2040; it includes a Land Use Map (Figure LU-1); and includes goals, policies, and actions to guide land use distribution throughout the city. By satisfying these requirements, the Land Use Element lays out basic guidelines and standards that act as building blocks for the General Plan's other elements. Each element, such as Circulation or Conservation, Open Space, and Recreation, provide more specialized guidance and corresponds with a land use category of the Land Use Element. For more information about environmental justice, please also refer to Chapter 1, Introduction.

### **The Land Use Element addresses the following topic areas:**

- Balanced and Equitable Growth and Preservation
- A Diverse Range of Land Uses
- Focused Planning Areas
  - » Downtown
  - » El Camino Real Corridor
  - » Hillsdale Station Area
- Shopping Areas in Transition
- Environmental Justice
  - » Community Health
  - » Equity Priority Communities
  - » Access to Healthy Food
- Community Engagement
- Climate Change and Land Use
- A Sustainable Economy
- Development Review
- Regional Cooperation
- General Plan Maintenance



Figure LU-1 Land Use Map



## RELEVANCE TO GENERAL PLAN THEMES



### Sustainability in this Element:

- Encourages higher density multifamily and mixed-use development in proximity to transit and jobs, and improves transit, bicycle, and pedestrian access to support a multimodal transportation network; both of which reduce car dependency and vehicle miles traveled (VMT).
- Supports infill development that provides benefits for preservation and ecological function.
- Supports efforts to transition to cleaner energy sources that reduce greenhouse gas (GHG) emissions, consistent with the City's adopted Climate Action Plan.



### Environmental Justice in this Element:

- Helps address vulnerabilities in equity priority communities, such as poverty, low educational attainment, and housing instability, by supporting affordable housing and economic development.
- Prioritizes City investment in public improvements that address health and infrastructure disparities in equity priority communities.
- Increases access to fresh food by allowing and encouraging local food production, micro agriculture, edible landscapes, rooftop gardens, community gardens, and urban farms.
- Supports collaboration between the City and local partners to improve healthy food access programs, such as the CalFresh Restaurant Meals Program.



### Community Engagement in this Element:

- Promotes inclusive outreach methods that encourage broad representation and are culturally sensitive, such as preparing notices and other materials in the predominant language spoken in the community and scheduling meetings at convenient times for community members.
- Supports early and frequent community engagement by clearly outlining when and how members of the public can provide input for development projects under review.
- Requires sponsors of new development projects to have early, frequent, and meaningful communication with community members and stakeholders.
- Encourages a recurring, statistically reliable community survey to gauge community service needs, policy preferences, and effective communication methods.



## GENERAL PLAN HEIGHT AND INTENSITY STANDARDS

Measure Y is a ballot measure that was passed by voters in November 2020. It retained existing height and density limits on new development, originally adopted under earlier ballot measures (Measure P and Measure H), and has a sunset date of 2030. Overall, the Measure Y height limit is set at up to 55 feet and a density limit that allows up to 50 units per acre. The height limit allows for exceptions in certain locations and under certain circumstances, and State Density Bonus law allows projects to exceed both height and density limits when certain percentages of affordable units are provided. Measure Y also established FAR limits, with a maximum of up to 3.0.

### General Plan Land Use Designations and Land Use Map

The General Plan land use designations are grouped into the following categories: Residential, Mixed-Use, Commercial, Office, Parks and Open Space, Public Facilities, Quasi-Public Facilities, and Utilities.

The land use designations identify the locations in the city where specific types of land uses may occur. The designations are meant to be broad enough to give the City flexibility, but also provide clear enough direction to achieve the vision of the General Plan. Figure LU-1 shows where each land use designation is applied within San Mateo.

The General Plan provides the overall parameters of density and intensity for urban land use designations, but each project must also comply with the specific rules of the relevant zoning district in the City's Zoning Code.

Residential densities for the land use designations are expressed in terms of dwelling units per acre (du/ac). Building heights are expressed by the number of stories. Building intensities for nonresidential uses are expressed in terms of floor-area ratio (FAR), which is the ratio of gross building floor area to net lot area, both expressed in square feet. For example, on a site with 10,000 square feet of land area, a FAR of 1.0 will allow 10,000 gross square feet of building floor area to be built. On the same site, a FAR of 2.0 would allow 20,000 square feet of floor area. FAR does not regulate building placement, form, or height, only the spatial relationship between building size and lot size; it represents an expectation of the overall intensity of future development. Figure LU-2 shows a visual representation of the relationship between height and FAR.

The maximum density assigned to each land use designation does not constitute entitlement, nor are property owners or developers guaranteed that an individual project, when tested against the General Plan's policies, will be able or permitted to achieve these maximums.





Some of the land use designations in this section include building heights and densities that exceed the limits set by Measure Y. Any components in the General Plan that are inconsistent with Measure Y will require voter approval before they can take effect. As required by law, for the duration that Measure Y is in effect, any inconsistency between the measure and other provisions of the Strive San Mateo General Plan 2040 shall default to the provisions specified in Measure Y, as stated in Policy LU 1-9.

Table LU-1 lists land use designations and their density, maximum FAR, height limit, and description.

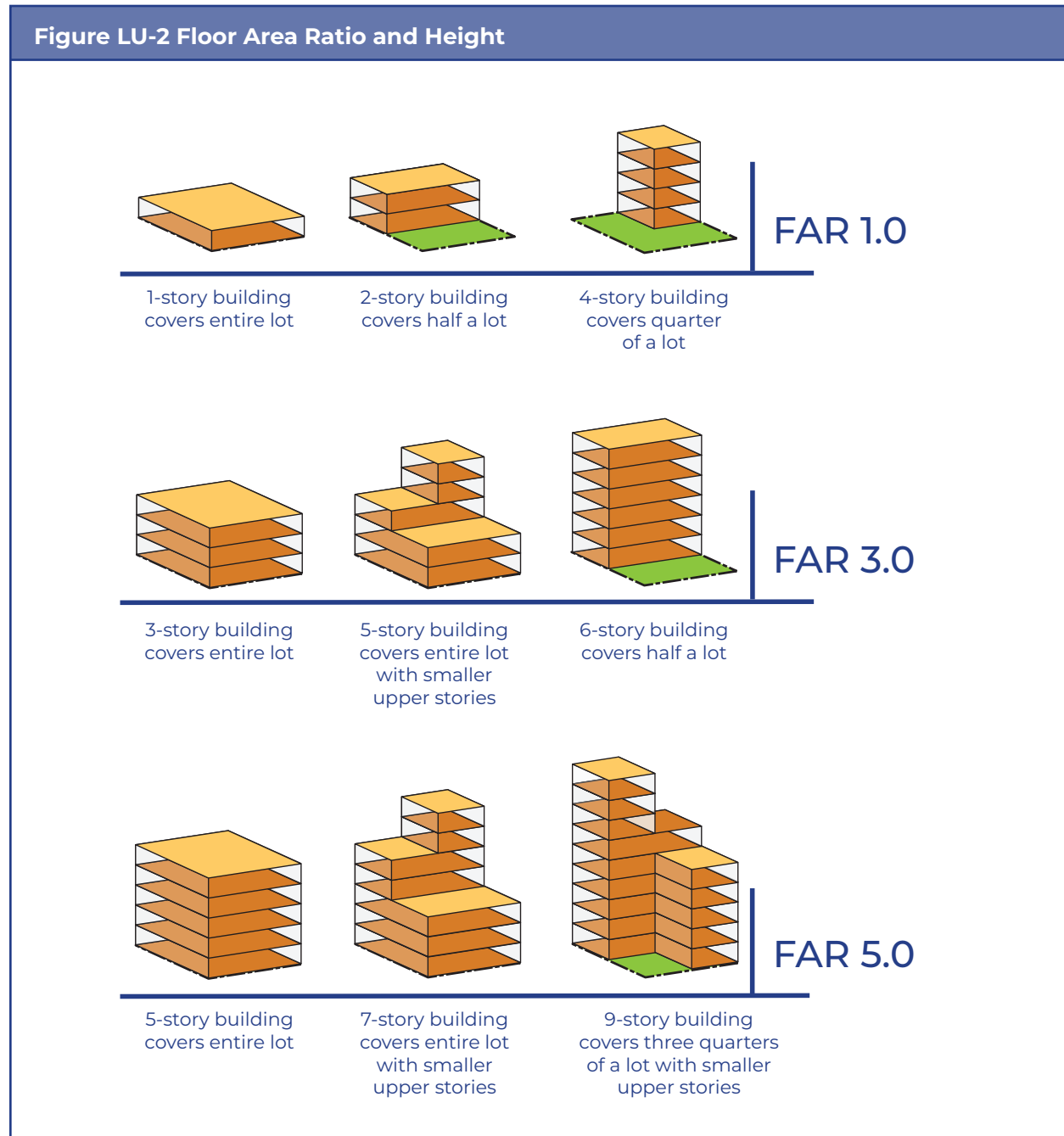


Table LU-1 Land Use Designations

Designation	Density (min/max) (Residential Uses)	Maximum FAR (Nonresi- dential uses)	Height Limit	Description
<b>Residential</b>				
<b>Residential Very Low</b>	Up to 9 du/ ac	n/a	1-3 stories	This designation allows very low-density residential dwellings, such as detached single-family homes, detached townhouses and duplexes, and accessory dwelling units.
<b>Residential Low I</b>	9 to 19 du/ ac	n/a	1-3 stories	This designation allows low-density residential dwellings, such as townhomes, duplexes, triplexes, fourplexes, condominiums, and apartments.
<b>Residential Low II</b>	20 to 35 du/ac	n/a	2-4 stories	This designation allows lower-density residential and multifamily dwellings, such as townhomes, duplexes, triplexes, fourplexes, condominiums, and apartments.
<b>Residential Medium I</b>	36 to 50 du/ac	n/a	3-5 stories	This designation allows low medium-density multifamily dwellings, such as townhomes, condominiums, and apartments.
<b>Residential Medium II</b>	51 to 99 du/ac	n/a	4-6 stories	This designation allows medium-density multifamily residential dwellings, such as condominiums and apartments, near mixed-use, office, and/or commercial areas. This designation can also be found along major streets, such as El Camino Real and near residential low or residential high areas of the city.
<b>Residential High I</b>	100 to 130 du/ac	n/a	5-8 stories	This designation allows higher-density multifamily residential dwellings, such as condominiums and apartments, in Downtown, in proximity to Caltrain stations and along major streets, such as El Camino Real.
<b>Residential High II</b>	100 to 200 du/ac	n/a	6-10 stories	This designation allows high-density multifamily residential dwellings, such as condominiums and apartments, in Downtown, in proximity to Caltrain stations, and along major streets, such as El Camino Real.
<b>Mixed-Use</b>				
<b>Mixed-Use Low</b>	10 to 35 du/ac	2.0	2-4 stories	This designation allows low-density mixed-use buildings that provide a mix of commercial, office, and/or residential uses within the same site or building. It is intended to allow a mix of uses that encourages people to live, work, play, and shop in close proximity.
<b>Mixed-Use Medium I</b>	36 to 50 du/ac	3.0	3-5 stories	This designation allows low medium-density mixed-use buildings that provide a mix of commercial, office, and/or residential uses within the same site or building. It is intended to allow a mix of uses that encourages people to live, work, play, and shop in close proximity.

Designation	Density (min/max) (Residential Uses)	Maximum FAR (Nonresi- dential uses)	Height Limit	Description
<b>Mixed-Use Medium II</b>	51 to 99 du/ac	4.0	4-6 stories	This designation allows medium-density mixed-use buildings that provide a mix of commercial, office, and/or residential uses within the same site or building. It is intended to allow a mix of uses near other mixed-use, commercial, or residential areas, and within Downtown.
<b>Mixed-Use High I</b>	100 to 130 du/ac	4.5	5-8 stories	This designation allows high-density mixed-use buildings that provide a mix of commercial, office, and/or residential uses within the same site or building. It is intended to allow a mix of uses near major streets, train stations, and shopping centers, and within Downtown.
<b>Mixed-Use High II</b>	100 to 200 du/ac	5.0	6-10 stories	This designation allows high-density mixed-use buildings that provide a mix of commercial, office, and/or residential uses within the same site or building. It is intended to allow a mix of uses near major streets, train stations, and shopping centers, and within Downtown.
<b>Commercial</b>				
<b>Neighborhood Commercial</b>	9 to 19 du/ ac	1.0	1-3 stories	This designation is intended for a mix of neighborhood-serving commercial uses that include small-scale retail stores and other commercial uses that serve the immediate neighborhood, such as grocery stores and pharmacies. Typical commercial uses include supermarkets, bakeries, drugstores, restaurants, delicatessens, barber shops, hair salons, laundromats, hardware stores, dry cleaners, small offices, and other personal services. Residential may also be allowed above the ground floor.
<b>Service Commercial</b>	Up to 20 du/ac	1.0	1-3 stories	This designation is intended for a wide range of service commercial and light industrial facilities. Example of uses in this land use include facilities that provide city-wide and regional services, such as auto repair services, building material yards, overnight boarding of animals, and industrial uses with light manufacturing, warehousing, and/or distribution facilities. These uses do not necessarily benefit from being in high-volume pedestrian areas, such as shopping centers or Downtown and can instead be found along South Amphlett Avenue, south of Indian Avenue and north of 2nd Avenue, in addition to other locations in the city.
<b>Regional Commercial</b>	Up to 50 du/ac	1.5	1-3 stories	This designation is intended for large-scale commercial developments that serve residents and visitors from the surrounding region, such as the Hillsdale Mall and Bridgepointe Shopping Center. Examples of commercial uses in this land use include shopping centers, large-format retail, auto sales, and travel-related services, such as hotels, gas stations, and restaurants. Residential may also be allowed.



Designation	Density (min/max) (Residential Uses)	Maximum FAR (Nonresi- dential uses)	Height Limit	Description
<b>Office</b>				
<b>Office Low</b>	10 to 35 du/ac	1.0	1-2 stories	This designation is intended for low-density office uses, such as medical, administrative, or professional offices. Supportive uses, including personal services, restaurants, health clubs, residential, day care, and limited retail sales are permitted. Research facilities that support the development of new products and may include professional uses, manufacturing, laboratories, and/or maker's spaces in the same building or site may be permitted depending on the type and intensity of the use.
<b>Office Medium</b>	36 to 50 du/ac	2.0	2-4 stories	This designation is intended for medium-density office uses, such as medical, administrative, or professional offices. Supportive uses, including personal services, restaurants, health clubs, residential, day care, and limited retail sales are permitted. Research facilities that support the development of new products and may include professional uses, manufacturing, laboratories, and/or maker's spaces in the same building or site may be permitted depending on the type and intensity of the use.
<b>Office High</b>	51 to 130 du/ac	3.0	3-5 stories	This designation is intended for high-density office uses, such as medical, administrative, or professional offices, and for research and science facilities that support the development of new products and may include professional uses, manufacturing, laboratories, and/or maker's spaces in the same building or site. Supportive uses including personal services, restaurants, health clubs, residential, day care, and limited retail sales are permitted.
<b>Other Designations</b>				
<b>Parks and Open Space</b>	n/a	n/a	n/a	This designation is intended for public parks, City-owned conservation lands and private open space or recreation facilities. Parks and open space areas can be found throughout the city and are important to preserve because they provide community members with access to nature, encourage healthy lifestyles, and support a mixture of active and passive recreation opportunities.
<b>Public Facilities</b>	n/a	See Zoning District or Specific Plans for maximum FAR	n/a	This designation is intended for facilities owned and/or operated by the City or other governmental agencies, such as City Hall, libraries, public school sites, San Mateo County's Event Center, and the public parking lots in Downtown.

Designation	Density (min/max) (Residential Uses)	Maximum FAR (Nonresi- dential uses)	Height Limit	Description
Quasi-Public	20 du/ac	See Zoning District or Specific Plans for maximum FAR	1-3 stories	This designation is intended for facilities owned and/or operated by quasi-public agencies and organizations, such as schools and faith-based organization facilities. Examples of these facilities include St. Matthew Catholic Church and the Nueva School. Ancillary residential uses, with a focus on affordable housing, may also be allowed when aligned with the organization’s mission or to provide employee housing.
Utilities	n/a	n/a	n/a	This designation is intended for facilities owned and/or operated by public utilities to serve the public with electricity, gas, water, and communications. Examples of uses in this designation include electricity substations, water tank sites and the sewer treatment plant.

## BALANCED AND EQUITABLE GROWTH AND PRESERVATION

It is important to plan future development and growth in the city in a way that maximizes efficient use of available land and infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity. The General Plan itself does not mandate change, but over time, change will occur based on market forces and the decisions of property owners. Climate change will also likely influence land use changes over the next 20 years in ways that are not currently fully known, which is why sustainability is a key theme throughout the General Plan.

Over the lifetime of this General Plan, the areas that are likely to change in the city include the El Camino Real corridor, Downtown, Hayward Park Caltrain station area, Hillsdale Mall and the surrounding Hillsdale Caltrain station area, and older shopping centers and office parks. The Strive San Mateo General Plan 2040 includes policies and actions that promote transit-oriented development around the Caltrain stations; encourages residential and mixed uses along El Camino Real; prioritizes a wide range of residential, lodging, restaurant, leisure, recreational, cultural, and other commercial uses in Downtown; and supports incorporating a mix of housing, shopping, services, and jobs into older shopping centers to create vibrant neighborhoods.

The Strive San Mateo General Plan 2040 also encourages innovative urban design approaches for Downtown, inspired by Barcelona’s “superblocks,” that focus on vehicle access at the periphery and reducing cut-through vehicle traffic to create pedestrian-focused, car-light spaces downtown. The Circulation Element adds more detail about the superblock concept and pedestrian improvements.



In addition to the General Plan, San Mateo has other plans that guide future development in specific areas of the city, including specific plans, master plans, and area plans. The City's existing specific plans, area plans, and master plans are shown on Figure LU-3. This figure also identifies two areas – Bel Mateo and 25th Avenue – that are opportunities for future focused planning efforts. This section is focused on balancing growth through land use. Policy direction on maintaining and improving the transportation network as the city grows can be found in the Circulation Element.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-1** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.

### POLICIES



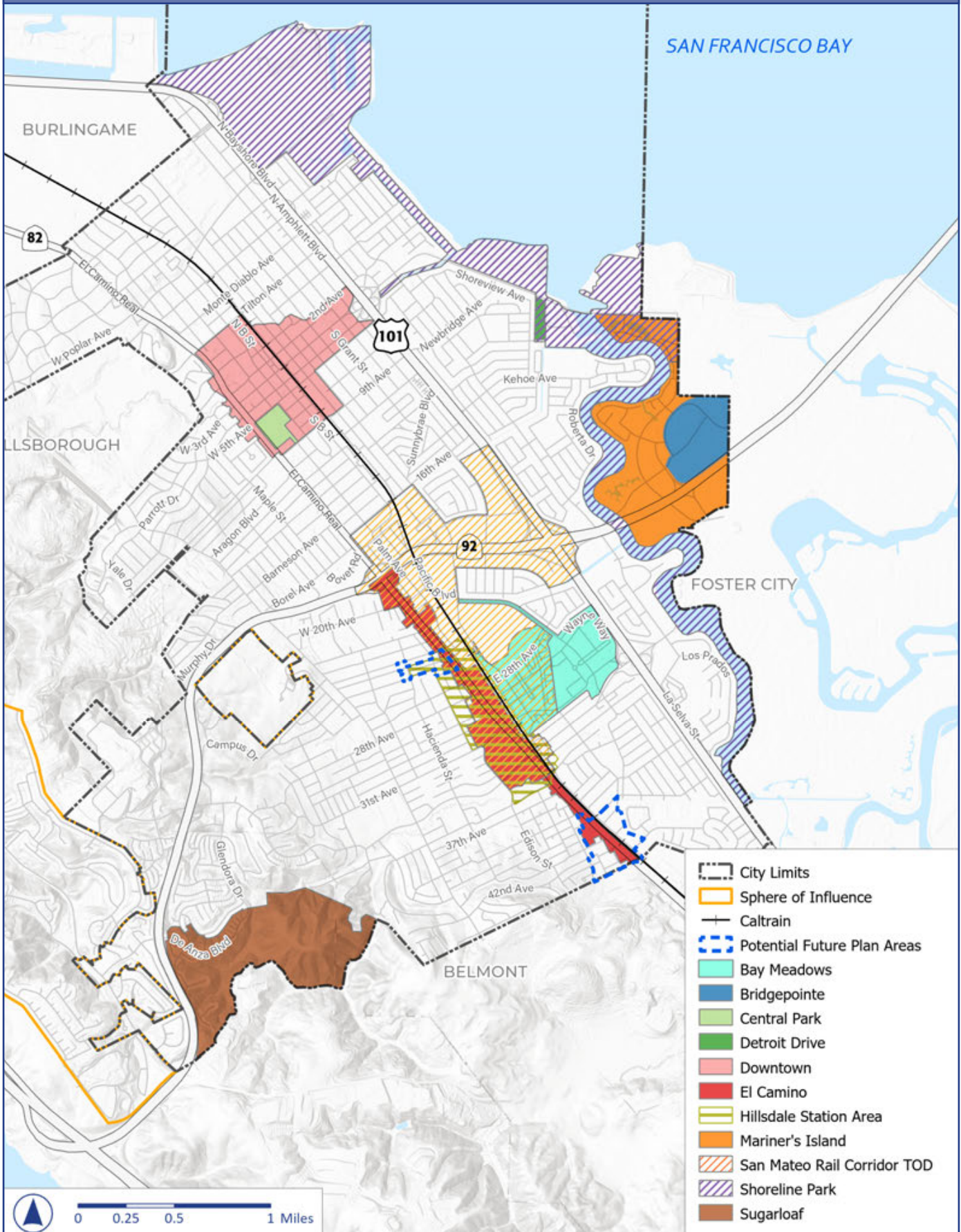
**Policy LU 1.1 Equitable Development.** Prioritize development projects that meet social and economic needs of the economically vulnerable populations to address and reverse the underlying socioeconomic factors in the community that contribute to residential and social segregation in the city. Provide a range of housing types, sizes, and affordability levels in all San Mateo neighborhoods.

**Policy LU 1.2 General Plan 2040 Maximum Development.** The General Plan Update Environmental Impact Report (EIR) assumes the following development projections for the year 2040:

- 21,410 new dwelling units
- 4,325,000 square feet of new nonresidential floor area



Figure LU-3 Specific Plan, Master Plan, and Area Plans



Source: City of San Mateo, 2022; ESRI, 2022; PlaceWorks, 2023.

Note: This map is included for informational purposes and is not adopted as part of this General Plan.

When approved nonresidential development reaches half of the anticipated development, evaluate the citywide jobs-housing balance.

When approved development within City Limits and unincorporated properties within the Sphere of Influence reaches the maximum number of new residential units and net new nonresidential square feet projected in the General Plan EIR, require that environmental review conducted for any subsequent development project address growth impacts that would occur from development exceeding the General Plan EIR's projections.

**Policy LU 1.3 Optimize Development Opportunities.** Encourage new development in major commercial and transit-oriented development areas, including the Downtown, Caltrain station areas, and the El Camino Real corridor, to maximize the density and intensity specified in the Land Use Plan and to efficiently use land and infrastructure resources.



**Policy LU 1.4 Mixed-Use.** Encourage mixed-use developments to include increased residential components to provide greater proximity between jobs and housing, promote pedestrian activity, and reduce traffic congestion and vehicle miles traveled (VMT).

**Policy LU 1.5 Surplus Land.** Consider redesignating City-owned land not required for public services, facilities, or infrastructure for development of affordable housing.

**Policy LU 1.6 Legal Nonconforming Developments.** Allow legally established nonconforming uses and buildings to be maintained, have minor expansions where appropriate, and be reconstructed if destroyed by fire or natural disaster. Encourage reconstruction and/or minor expansions to have a design that is visually compatible with surrounding development and complies with the City's development standards.

**Policy LU 1.7 Annexation.** Annex urbanized areas of the unincorporated land adjacent to the City Limits where landowners petition the City to be annexed, subject to the following conditions:

- The annexation is comprehensive, rather than piecemeal; and
- Landowners will pay the full cost of City services, will assume a proportionate share of existing City debts, and will contribute to the existing capital improvements of the City, which will benefit the area to be annexed.

**Policy LU 1.8 New Development within the Sphere of Influence.** Work with the County of San Mateo to require new developments and related infrastructure within the Sphere of Influence to be consistent with the City's General Plan, Zoning Code requirements, and development standards.

**Policy LU 1.9 Voter-Approved Growth Limits.** As required by law, for the duration that Measure Y is in effect, any inconsistency between the measure and other provisions of the General Plan's Land Use Element shall default to the provisions specified in Measure Y.

## ACTION

**Action LU 1.10 Review of New Development.** Track actual growth of both new housing units and net new nonresidential floor area annually and review every two to three years. Use this information to monitor nonresidential floor area and housing units in San Mateo and to adjust this General Plan, infrastructure plans, and circulation plans, as necessary, if actual growth is exceeding projections.

**GOAL LU-2** Balance well-designed development with thoughtful preservation.

## POLICIES

**Policy LU 2.1 Development Intensity/Density.** Regulate development density/intensity to recognize natural environmental constraints, such as floodplains, earthquake faults, debris flow areas and other hazards, availability of urban services, and transportation and circulation constraints.

**Policy LU 2.2 Caltrain Stations and El Camino Real Minimum Densities.** Require new residential development within a half mile of a Caltrain station or within one block of the El Camino Real corridor to meet the minimum density established by the applied land use designation and encourage new development to achieve maximum density.

**Policy LU 2.3 Community Benefits.** Develop a framework to allow density/intensity bonuses and concessions in exchange for the provision of community benefits, such as additional affordable housing, increased open space, public plazas or recreational facilities, subsidized retail space for small businesses, subsidized community space for nonprofits that provide community support services or childcare facilities, pedestrian and multimodal safety improvements, and/or off-site infrastructure improvements above minimum requirements.



**Policy LU 2.4 Clustering.** Encourage clustered development where benefits to natural ecology, habitat conservation, and/or preservation of historic resources can be achieved.

## ACTION



**Action LU 2.5 Community Benefits Dashboard.** Create an online public portal that highlights the community benefits derived from new development projects, such as payment of in-lieu fees, contribution to the childcare fund, contribution to the public art fund, and other benefits to improve and standardize communication about new development projects and their benefits.





## A DIVERSE RANGE OF LAND USES

To help keep San Mateo a great place to live, work, visit, and raise a family, it is important to plan for a diverse range of land uses that support one another. Placing housing, job centers, shopping, and eating areas close together and near transit encourages people to live, work, play, and shop without needing a car to travel between destinations. Commercial centers and an active Downtown provide a space where people can work, recreate, and build community while also supporting the city's fiscal health.

The Strive San Mateo General Plan 2040 includes land use designations and policies that concentrate higher-density residential, mixed-use, office, and commercial uses in and around Downtown, along the El Camino Real corridor or within a half mile from a Caltrain station. It also supports locating and preserving certain commercial uses, such as convenience retail or grocery stores, adjacent to residential neighborhoods, which encourages walkability and increases access to healthy foods. This General Plan supports the development of office buildings and business parks that facilitate transit, pedestrian, and bicycle commutes. It also promotes parks, open space, cultural and recreational facilities, and community gathering spaces for all members of the San Mateo community. For background information and policies about parks, open space, and recreational facilities, please refer to the Conservation, Open Space and Recreation Element.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-3** Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.

### POLICIES

**Policy LU 3.1 Housing Diversity.** Promote safe, attractive, and walkable residential neighborhoods with diverse types and sizes of homes for individuals, families, and households of all income levels.

**Policy LU 3.2 Commercial Development.** Encourage development that builds on the strengths and unique qualities of existing neighborhoods and provides appropriate transition in terms of intensity of use, height, bulk, and design. Require commercial development adjacent to residential areas to appropriately address circulation, traffic, truck loading, trash/recycling, noise, visual impacts, public safety, hazardous materials storage, fire safety, air pollutant emissions, and odors in a way that minimizes impacts on neighboring uses.

**Policy LU 3.3 Neighborhood Commercial Preservation.** Encourage the preservation of local-serving commercial retail and service uses in neighborhood shopping districts.

**Policy LU 3.4 Convenience Retail.** Encourage and preserve convenience stores and neighborhood retail uses adjacent to residential neighborhoods, including as part of new mixed-use development.



**Policy LU 3.5 Support Service Uses.** Encourage businesses that provide a variety of services, such as restaurants, daycare facilities, medical clinics, gyms, pharmacies, and grocery stores in locations that serve residential neighborhoods and commercial/office uses. Prioritize the development of these services in equity priority communities in the city.

**Policy LU 3.6 Hotels.** Encourage development of hotels in commercial areas and allow small hotels in mixed-use districts where they are consistent with the density of adjacent uses.

**Policy LU 3.7 Visitor Economy.** Collaborate with other Peninsula cities and the San Mateo County/Silicon Valley Convention and Visitors Bureau to support the continued development of the visitor economy of both the city and the region, including lodging, entertainment, recreation, retail, and local events; encourage uses that attract visitors. Incentivize through fee reduction and visitor perks, sustainable modes of travel to and from the city to reduce both the use of air travel and gas-powered vehicles.



**Policy LU 3.8 Workplaces.** Develop office buildings and business parks to facilitate transit, pedestrian, and bicycle commutes. Provide compact development, mixed uses, and connectivity to transit to reduce vehicle miles traveled (VMT).

- Policy LU 3.9 Office Park Evolution.** Support the transition of single-use office parks into mixed-use districts that include residential, retail, office, services, and/or parks and open space. Within an office site that is redeveloping as mixed-use, locate offices and commercial space closest to high-volume roadways and locate new residential uses as far as possible from high-volume roadways.
- Policy LU 3.10 Service Commercial.** Retain service commercial and light industrial uses in San Mateo to support local businesses and to meet the needs of residents locally. Preserve properties that are zoned for service commercial uses and discourage uses that are allowed elsewhere in the city from locating in service commercial areas.
- Policy LU 3.11 Community Gathering Places.** Provide and maintain inviting public spaces and streets that provide space for all members of the San Mateo community to meet, gather, and enjoy.
- Policy LU 3.12 Publicly Accessible Spaces.** Integrate a variety of privately owned and maintained publicly accessible spaces into new development and require signage that clearly identifies these spaces as publicly accessible.
- Policy LU 3.13 Cultural Facilities and Public Art.** Recognize cultural facilities and public art as part of a healthy and thriving community. Use funds from the City's art in-lieu fee to enhance existing public art and cultural facilities and encourage new facilities that reflect the character and identity of the surrounding neighborhoods.
- Policy LU 3.14 School Site Reuse.** Encourage the school district to prioritize affordable housing and community recreation needs when a school site is planned for reuse or redevelopment, in accordance with the priorities in the Housing Element and Conservation, Open Space, and Recreation Element.
- Policy LU 3.15 Residential Uses to Support Institutions.** Support the development of housing at quasi-public institutions such as schools, churches, and other facilities of an educational, religious, charitable, or philanthropic nature, consistent with the mission of these organizations. Encourage the development of ancillary residential uses when aligned with the organization's mission or to provide housing for employees.
- Policy LU 3.16 Public Facilities.** Encourage reuse or redevelopment of public facilities to residential and/or recreational uses that provide a public benefit to the community, such as community gardens.
- Policy LU 3.17 Peninsula Golf and Country Club.** Support the retention of the existing club and recreation use. If the site is redeveloped, residential development that is compatible with adjacent uses in terms of density and intensity should be encouraged.

## ACTIONS

- Action LU 3.18 Permitted Uses.** Re-evaluate the types of commercial uses that are permitted and that require a special-use permit in all commercial districts to ensure requirements are forward looking and aligned with current economic needs and trends.



**Action LU 3.19 Major Institutions/Special Facilities.** Work with relevant agencies and organizations to support the long-term viability of major institutions and special facilities that provide important recreational, educational, or medical services, such as the San Mateo County Events Center, College of San Mateo, San Mateo County Hospital, Mills Health Center, and Peninsula Golf and Country Club. Require a Specific Plan and/or Master Plan to guide reuse or redevelopment of institutions and special facilities when appropriate.

## FOCUSED PLANNING AREAS

This section focuses on three specific areas around the city – Downtown, the El Camino Real Corridor, and the Hillsdale Station Area. These areas are near transit and are designated for future growth and change in this General Plan as well as in other adopted planning documents:

- **The Downtown Area Plan**, adopted in 2003 and revised in 2009, covers about 70 blocks traditionally known as Downtown, plus the area known as the Gateway and portions of adjacent neighborhoods. This plan pertains to new Downtown development and focuses on preserving existing Downtown resources and enhancing its vitality and activity while also maintaining a sense of place.
- **The El Camino Real Master Plan**, adopted in 2001, provides guidance on streetscape, design guidelines, and implementation strategies for the future of the El Camino Real corridor, from State Route (SR) 92 to the Belmont city border.
- **The Hillsdale Station Area Plan**, adopted in 2011, is the guiding document for the Hillsdale Station Area that sets forth the regulatory framework, goals, and policies to transform the area surrounding the Hillsdale Caltrain station into a sustainable, pedestrian-oriented transit hub.



This General Plan includes additional policy guidance to help plan for the growth and change that is anticipated and encouraged in these three focused planning areas. Policy guidance focused on historic resources, city image, and the design of mixed-use and commercial areas can be found in the Community Design and Historic Resources Element. The Circulation Element also includes policies focused on promoting walking and multi-modal transportation improvements in Downtown and facilitating efficient travel and pedestrian safety along the El Camino Real corridor. It also includes policy guidance for transit stations, including the Hillsdale Station.

## GOALS, POLICIES, AND ACTIONS

### Downtown

**GOAL LU-4** Maintain downtown San Mateo as the economic, cultural, and social center of the community.

### POLICIES

- Policy LU 4.1** **Downtown Land Uses.** Allow and prioritize a wide range of residential, dining, entertainment, lodging, and other commercial uses downtown, at high intensities and densities, with strong multi-modal connectivity to the San Mateo Caltrain station and other transit.
- Policy LU 4.2** **Quality of Downtown Development.** Promote quality design of all new development that recognizes the regional and historical importance of Downtown San Mateo and strengthens its pedestrian-friendly, historic, and transit-oriented character.
- Policy LU 4.3** **Significant Historic Structures.** Protect key landmarks, historic structures, and the historic character of Downtown, as defined in the Community Design and Historic Resources Element.

### ACTIONS

- Action LU 4.4** **Downtown Area Plan.** Update the Downtown Area Plan to support and strengthen the Downtown as a vibrant and active commercial, cultural, and community gathering district. The updated Downtown Area Plan shall align with the General Plan, integrate recommendations from other concurrent City efforts, focus growth and intensity in proximity to the Caltrain station, encourage superblock concepts or approaches and allow parklets, update parking standards and parking management strategies, allow for increased housing units and density, and support high-quality, pedestrian-oriented design and architecture.
- Action LU 4.5** **Downtown Special Events.** Sponsor and support Downtown activities and events that brings Downtown to life, attract residents and visitors, promote local businesses, create inclusive community gatherings, and provide information to residents about City initiatives and services.



## El Camino Real Corridor

**GOAL LU-5** Promote residential and mixed land uses along El Camino Real to strengthen its role as both a local and regional corridor.

## POLICIES

- Policy LU 5.1 Housing on El Camino Real.** Encourage new residential uses along El Camino Real as part of both pure residential and mixed-use development to diversify the existing commercial character.
- Policy LU 5.2 El Camino Real Landscaping.** Retain the general residential and landscaped character of El Camino Real north of Tilton Avenue. Promote the visual upgrading of El Camino Real south of 9th Avenue through increased landscaping, coordination of public improvements, property maintenance, and sign control, and through conformance with the El Camino Real Master Plan or a future consolidated Corridor Plan per Action LU 5-3.

## ACTION

- Action LU 5.3 El Camino Real Corridor Plan.** Prepare a Corridor Plan for El Camino Real that assembles existing planning documents for the corridor into a single comprehensive plan that implements the El Camino Real policies in General Plan 2040.





## Hillsdale Station Area

**GOAL LU-6** Promote transit-oriented development around the Hillsdale Caltrain station.

## POLICIES

- Policy LU 6.1 Rail Corridor Transit-Oriented Development Plan (Rail Corridor Plan).** Continue to implement the Rail Corridor Plan to allow, encourage, and provide guidance for the creation of world-class transit-oriented, mixed-use development (TOD) within a half-mile radius of the Hillsdale and Hayward Park Caltrain stations, while maintaining and improving the quality of life for those who already live and work in the area.
- Policy LU 6.2 Hillsdale Shopping Center.** Allow redevelopment of the Hillsdale Shopping Center for a mix of uses, including commercial, retail, office, hotel, and residential uses. Update the Hillsdale Station Area Plan or require preparation of a master development plan to ensure the site is developed comprehensively and provides appropriate transitions to the adjacent neighborhoods.

## ACTION

- Action LU 6.3 Hillsdale Station Area Plan.** Update the Hillsdale Station Area Plan to foster higher-density residential, office and mixed-use, transit-oriented development that connects to neighborhoods to the east and west, improves bicycle and pedestrian circulation to the station, and increases park and open space areas.



## SHOPPING AREAS IN TRANSITION

Over the lifetime of this General Plan, some older shopping centers in the city are likely to change as old formats of brick-and-mortar retail evolve. The Hillsdale Mall, Bridgepointe Shopping Center, and Bel Mateo commercial area (Olympic Village) are three areas around the city that appear likely to experience meaningful transition over the next 20 years. Since these shopping areas provide neighborhood-serving uses that support nearby residences, the intent of this section is to support preservation while allowing for transition to a different mix of housing, shopping, services, and jobs. Policy guidance for other neighborhood shopping areas is contained under Goal LU-3 and policies related to the Hillsdale Mall are under Goal LU-6. Policies focused on the design of mixed-use and commercial areas can be found in the Community Design and Historic Resources Element.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-7** Support the transition of shopping areas designated for new uses into vibrant districts with a range of housing, shopping, services, and jobs.

### POLICY

**Policy LU 7.1 Shopping Areas in Transition.** Support the long-term viability of shopping centers and districts that provide neighborhood-serving uses by allowing these sites to redevelop with higher-density, mixed-use development that includes restaurants, services, other commercial uses, housing and open space, while preserving core neighborhood-serving uses.

## ACTIONS

- Action LU 7.2 Bridgepointe Area Plan.** Update and consolidate the Bridgepointe Master Plan and Mariner’s Island Specific Plan into one planning document to guide redevelopment of the Bridgepointe Shopping Center and the surrounding properties into a mixed-use neighborhood that maintains its regional retail component while developing a diverse range of housing types, including affordable housing; new parks and recreational facilities; community gathering places; ample facilities to support transit, bicycling, and walking; and a range of businesses and services. The plan shall include safe access for pedestrians, cyclists, and transit riders from Bridgepoint to the City’s transit corridors, such as Caltrain and El Camino Real.
- Action LU 7.3 Bel Mateo Area Plan.** Prepare a Specific Plan or Master Plan to guide redevelopment of the Bel Mateo area into a mixed-use neighborhood with a diverse range of neighborhood-serving commercial uses and amenities; new market-rate and affordable housing, ample facilities to support bicycling and walking; and publicly accessible park and open space areas.

## ENVIRONMENTAL JUSTICE

The Strive San Mateo General Plan 2040 includes policies and actions that will support equitable distribution of resources and opportunities and reduce the impacts of environmental hazards in the areas of the city that experience the highest levels of pollution and negative health outcomes, such as asthma and low birth weight babies, as well as the greatest social and economic disadvantages, such as poverty and housing instability. This General Plan uses the term equity priority community for these neighborhoods and focuses on improving environmental justice and public health for the people who live in these communities by promoting meaningful community engagement and prioritizing improvements that address their needs.

During the development of this General Plan, the City identified two equity priority communities using local knowledge and CalEnviroScreen: North Central and North Shoreview/Shoreview. Figure I-5 in Chapter 1, Introduction, shows the location of these communities and provides more context about the health and socioeconomic issues affecting residents in these neighborhoods.

This section includes policy guidance focused on improving community health and access to healthy foods, with specific policies focused on the identified equity priority communities. State law allows cities and counties to address environmental justice either by adopting a stand-alone Environmental Justice Element or by incorporating environmental justice goals, policies, and actions into other elements. This General Plan takes the approach of incorporating environmental justice goals, policies, and actions into all its elements; therefore, policies and actions focused on environmental justice can also be found throughout the Strive San Mateo General Plan 2040. Safe and sanitary housing, as required by Senate Bill (SB) 1000, is addressed in the Housing Element. Please refer to the Housing Element for housing-related programs that are focused on equity priority communities.



In addition to policies and actions that the City will implement through the Strive San Mateo General Plan 2040 and other City plans, other agencies and organizations, such as the County of San Mateo, nonprofits, and religious groups, also provide resources and help to support equity priority communities. It is important to note that the State regularly updates CalEnviroScreen, and new data sources may become available. The equity priority communities mapped in this General Plan may change as conditions change.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-8** Support the equitable health and well-being of all neighborhoods in San Mateo and all members of the San Mateo community by improving conditions in equity priority communities.

### Community Health

#### POLICY



**Policy LU 8.1** **Prioritizing Community Health.** Continue to support the physical and mental health and well-being in equity priority communities by prioritizing public safety, resolving land use conflicts and incompatible uses that pose risks to health or safety, remediating contamination, and enforcing building code standards.

#### ACTIONS



**Action LU 8.2** **Collaborations for Community Health.** Develop intentional, strategic, and mutually beneficial relationships with organizations engaged in improving health and well-being, reducing environmental health disparities, expanding access to affordable quality healthcare and mental healthcare, and mitigating negative environmental health hazards. Encourage greater emphasis on expanding or improving health services, including mental health services, in equity priority communities.



**Action LU 8.3** **Health Disparities.** Coordinate with the San Mateo County Public Health Department to promote healthier communities through education, prevention, intervention programs, and other activities that address health disparities and inequities that exist in San Mateo.



**Action LU 8.4** **City Investment.** Use funds collected by the park impact fee to invest in programs and public improvements that connect residents with opportunities to increase their physical activity and improve their physical and mental health, especially in equity priority communities with higher risk of negative public health outcomes. Identify new funding sources for programs and public improvements, if needed.

## Equity Priority Communities

### POLICIES



#### **Policy LU 8.5**

**Community Preservation.** Prevent displacement in equity priority communities by protecting tenants, helping homeowners remain in place, and funding affordable housing.



#### **Policy LU 8.6**

**Safe and Sanitary Homes.** Encourage homes and neighborhoods that are free of environmental health hazards.



#### **Policy LU 8.7**

**Access to Parks and Recreation.** Provide attractive, comfortable, and safe pedestrian and cyclist access to public parks and recreational facilities in and near equity priority communities.

### ACTIONS



#### **Action LU 8.8**

**Streetscape and Safety Improvements.** Work with residents in equity priority communities to identify sidewalk, lighting, landscaping, and roadway improvements needed to improve routes to parks, schools, recreation facilities, and other destinations within the community. Prioritize investments to address health disparities in equity priority communities in the annual Capital Improvement Program.



#### **Action LU 8.9**

**Equity Priority Community Mapping.** Regularly update the map identifying equity priority communities with data from CalEnviroScreen or other sources, including information from community members.



#### **Action LU 8.10**

**Equity Priority Communities Plan.** Prepare a plan for the equity priority communities that addresses the needs of each community, including health, safety, and improved circulation with community input. The plan shall seek to ensure the streets in each community are measurably safe, include ADA accessibility, and have adequate on-street parking. Changes included in the plan shall be developed and enacted with the express purposes of improving health, safety, and welfare for the members of each community.



#### **Action LU 8.11**

**City Services.** Work with residents in equity priority communities to identify services that the City or other partners could provide to improve safety, sanitation, and security in these neighborhoods.



#### **Action LU 8.12**

**Neighborhood Beautification.** Support and promote neighborhood clean-up and beautification initiatives in equity priority communities, including in partnership with neighborhood organizations.

## Access to Healthy Food

### POLICIES



**Policy LU 8.13 Locally Grown Food.** Increase access to fresh food by allowing and encouraging local food production, micro agriculture, edible landscapes, rooftop gardens, community gardens, and urban farms, and by distributing information about community-supported agriculture programs that provide affordable access to fresh food.



**Policy LU 8.14 Retail Food Sources.** Strive to ensure that all households in San Mateo, including those in equity priority communities, have access to retail sources of affordable healthy food, including organic options, such as full-service grocery stores, specialty food markets, farmers markets and/or community gardens, and convenience stores with fresh food options, by working to retain existing retail sources and attract new ones.

### ACTIONS



**Action LU 8.15 Healthy Food Access.** Support the work of San Mateo County Health and other local partners to:

- Continue and expand the ability to use the Electronic Benefit Transfer (EBT) program at farmers' markets and other sources of healthy food.
- Implement programs to encourage markets and convenience stores to stock fresh produce and other healthy foods.
- Encourage restaurants to enlist restaurants in the CalFresh Restaurant Meals Program, which allows people at a high risk of chronic hunger to use CalFresh benefits to buy prepared meals at participating restaurants.
- Continue to provide and expand the subsidized senior lunch program at the San Mateo Senior Center and the Congregate Nutrition Program at the King Center Community Center.



**Action LU 8.16 Urban Agriculture.** Develop City regulations that encourage urban agriculture, community gardens, and farm stands, as appropriate.





## COMMUNITY ENGAGEMENT

Community engagement and resident participation is a high priority for San Mateo. The Strive San Mateo General Plan 2040 aims to engage all residents and stakeholders on matters of development, growth, and public policy in ways that are inclusive, equitable, and give everyone an opportunity to participate in the process. Public engagement with disadvantaged communities can help identify programming and policy changes to allow for improvements where it is needed most. However, many members of vulnerable populations and disadvantaged communities face barriers to meaningful engagement. For example, people with disabilities may have difficulty accessing a meeting location or hearing verbal dialogue. Non-English speakers may have difficulty reading meeting notices or meeting materials in English. Low-income households may be more likely to work multiple jobs or do shift work that precludes attending evening meetings. It is important to understand the specific vulnerable populations and disadvantages faced by San Mateo residents to minimize the barriers to their participation. This General Plan takes the approach of incorporating community engagement goals, policies, and actions into all of its elements; therefore, policies and actions focused on community engagement can also be found throughout the General Plan.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-9** Include everyone in community development decisions for a shared, sustainable future.

### POLICIES



#### Policy LU 9.1

**Inclusive Outreach.** Notify the community when planning and development decisions are being considered and inform community members about how they can engage in the process. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.

**Policy LU 9.2**

**Equitable Engagement.** Provide support for increased community participation in the planning and development processes, particularly in areas with language barriers or a concentration of low-income households that have been historically underrepresented and/or disproportionately impacted by traffic and municipal or industrial uses.

**Policy LU 9.3**

**Development Projects.** Communicate clearly how and at what stages members of the public can provide input on development projects under review and ensure public awareness of all the factors the City must consider in approving or denying a project.

**Policy LU 9.4**

**Applicant Communications.** Require that sponsors of new development projects, especially those that require Planning Commission and/or City Council approval, have early, frequent, and meaningful communication with affected community members and stakeholders, including members of equity priority communities.

## ACTIONS

**Action LU 9.5**

**Community Partners.** Work with community-based organizations and community partners to engage members of equity priority communities in planning and policy decisions.

**Action LU 9.6**

**Community Surveys.** Periodically conduct statistically reliable community surveys, representative of the demographics of the population, to gauge community service needs, policy preferences, and effective communication methods.

**Action LU 9.7**

**Communications Strategy.** Develop a communications strategy that outlines goals and tactics to engage a broad cross-section of the community.

- Prepare public notices and other materials in the predominant language(s) spoken in the community and provide interpretation services at meetings as needed.
- Make public notices and other important documents available in print at local libraries, community centers, or other gathering places.
- Use culturally appropriate approaches.
- When possible, schedule and locate meetings to be convenient for community members to attend.
- Use the City's website, social media, and other communication channels to share information about how community members can participate in public meetings.
- Gather data to understand the economic, gender, age, and racial diversity of the affected population before designing communication approaches aimed at reaching the affected population.
- Provide notification and outreach for development projects using clear and easy-to-understand language to ensure all stakeholders and interested community members understand and have the ability to engage in the development review process.



## CLIMATE CHANGE AND LAND USE

Climate change is driven by an increase in (GHGs in Earth's atmosphere, trapping more heat near the surface and changing Earth's climate in a number of ways. These changes often include increasing the frequency and severity of natural hazards, either directly (such as causing summer temperatures to reach dangerously high levels) or indirectly (such as warm temperatures and droughts leading to more dry vegetation, increasing wildfire risks). The hazardous situations created or exacerbated by climate change may result in an increased chance of personal injury or other harm, a greater risk of damage to buildings and infrastructure, and disruption of essential services, among other hardships. San Mateo, like most communities in California, is expected to experience multiple direct impacts as a result of climate change, including potential flooding, sea level rise, wildfires, drought, extreme heat, and negative effects on public health and biodiversity.

Land use decisions and regulations can decrease GHG emissions by affecting how frequently and how far people drive (the single greatest source of GHGs in San Mateo) and how much electricity or natural gas is used in buildings. Land use decisions can also reduce the exposure of people and assets to climate change hazards by locating new development outside of hazard areas and/or designing it to withstand expected future events. This element includes policies and actions aimed at significantly reducing GHG emissions by encouraging sustainable urban design, requiring transit-oriented and mixed-use development, and reducing car dependency. It also supports San Mateo's adopted Climate Action Plan, which is the City's comprehensive strategy to reduce GHG emissions.



Most buildings, both residential and nonresidential, use electricity and natural gas to operate appliances and other pieces of equipment. While sources of electricity have become much cleaner over time and will continue to become cleaner due to State law and utility policies, the GHG emissions associated with using a unit of natural gas has remained constant, as natural gas is a fossil fuel and cannot become a cleaner energy source. To reduce GHG emissions, buildings can be “decarbonized,” or constructed to be mostly electric or all electric, and existing buildings can be electrified as part of retrofit activities. Advances in electric equipment, such as those used for space heating, water heating, and cooking, can also help make building electrification easier and more cost-effective.

Both this Land Use Element and the Safety Element include policies and actions to plan ahead for future climate conditions and protect San Mateo residents from climate hazards. The Public Services and Facilities Element includes policies and actions to promote energy conservation and renewable energy.

While this General Plan includes policy guidance to help reduce GHG emissions, data about existing and projected GHG emissions in San Mateo and strategies for the reduction of GHG emissions can also be found in the City’s Climate Action Plan.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-10** Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.

### POLICIES



**Policy LU 10.1 Effects of Climate Change.** Consider the effects of climate change in updating or amending the General Plan, disaster planning, City projects, infrastructure planning, future policies, and long-term strategies. Recognize potential climate change consequences, such as sea level rise, flooding, higher groundwater, less availability of drinking water, hotter temperatures, increased wildfire risk, and changing air quality. Prioritize protecting equity priority communities from the disproportionate burden of climate hazards, including against risks of displacement and challenges in rebuilding after major incidents.



**Policy LU 10.2 Decarbonized Building Stock.** Eliminate the use of fossil fuels as an energy source in all new building construction and reduce the use of fossil fuels as an energy source in the existing building stock at the time of building alteration through requirements for all-electric construction.



**Policy LU 10.3 Sustainable Improvements.** Ensure that all improvements to existing structures are developed or remodeled in a sustainable and resilient manner.

### ACTIONS



**Action LU 10.4 Climate Action Plan Implementation.** Implement the greenhouse gas reduction strategies to meet the City’s Climate Action Plan emission-reduction goals.



**Action LU 10.5 Climate Action Plan Monitoring.** Monitor and report progress on the implementation of the City’s Climate Action Plan on an annual basis. Regularly review new opportunities and approaches to reduce emissions consistent with the Climate Action Plan’s goals.



**Action LU 10.6 Greenhouse Gas Inventory.** Every five years, prepare an updated greenhouse gas emissions inventory consistent with the Climate Action Plan.



**Action LU 10.7 Engage the Public in the Climate Action Plan.** Provide public information to educate residents and businesses on the Climate Action Plan and to spark behavioral changes in individual energy and water consumption, transportation mode choices, and waste reduction.



**Action LU 10.8 Building Decarbonization.** Evaluate and adopt reach codes and other policies to decarbonize the building stock.



**Action LU 10.9 Resilience of Critical Facilities and Public Infrastructure.** Identify critical facilities and public infrastructure in areas vulnerable to climate change hazards, and work to site, design, and upgrade these facilities with consideration for future increases in severity that may occur over the anticipated life of the development. In cases where facilities cannot be sustainably maintained, evaluate the costs and benefits of relocation. Where facilities can be safely sited for the near term, but future impacts are likely, prepare an adaptive management plan detailing steps for maintenance, retrofitting, and/or relocation.



**Action LU 10.10 Clean Fuel Infrastructure.** Support efforts to build electric vehicle charging stations and clean fuel stations in San Mateo, including hydrogen and sustainably sourced biofuels, as supported by market conditions.



## A SUSTAINABLE ECONOMY

The City's fiscal health and livability depend on maintaining a diverse community of businesses that are supported by residents, visitors, and workers. High-quality public services, reliable infrastructure, and local quality of life are critical to attracting, retaining, and growing local businesses. In addition to providing land where businesses can locate and expand, the City plays a key role in building, maintaining, and/or coordinating infrastructure to support businesses, including roadways, water and sewer services, solid waste disposal, and energy and telecommunications systems. The financial resources to address these needs require that the City maintain a healthy and fiscally sustainable budget. This, in turn, depends on cultivating a diverse tax base that includes a broad mix of businesses and balances the need for both housing and job-generating land uses.

The economic success of regional industry clusters, such as technology, life science, and entertainment has generated a concentration of jobs on the Peninsula. As a result, demand for housing from workers moving to the area for job opportunities has increased at a much higher rate than housing production. Limited housing production in the Bay Area region has created a housing shortage, which has in turn led to rising costs and other housing challenges, such as overcrowding and displacement.

A sustainable economy in 2040 will harness the strength of the regional job market to create quality jobs, support the growth of local businesses, and provide local housing opportunities for residents and workers at all income levels. An important component of a sustainable economy includes balancing job growth with housing development to ensure that all workers have an opportunity to live in proximity to their job. There is also a need to support local workers and the local economy by encouraging local hires, living wages, and training for workers, such as an apprenticeship program. The City currently charges a Commercial Linkage Fee for new job-generating construction like offices, hotels, medical buildings, retail, and restaurants to support the creation or preservation of affordable housing to assist lower- and moderate-wage workers who cannot afford the current housing market prices.

During the development of the Strive San Mateo General Plan 2040, the City completed a comprehensive update to the Housing Element. Please refer to the Housing Element for programs aimed at supporting households facing housing challenges, such as overcrowding and potential displacement. The Housing Element also encourages housing for all income groups.



## GOALS, POLICIES, AND ACTIONS

**GOAL LU-11** Cultivate a diverse, thriving, inclusive, and green economy.

### POLICIES

**Policy LU 11.1 Economic Development.** Prioritize the retention and expansion of existing businesses and attract new businesses that strengthen and diversify the City's economic base.

**Policy LU 11.2 Local Employment.** Encourage a diverse mix of uses that provide opportunities for employment of residents of all skill and education levels.

**Policy LU 11.3 Local Hiring and a Living Wage.** Encourage developers and contractors doing work in the city to evaluate hiring local labor from the Bay Area region and providing living wages.

**Policy LU 11.4 Diverse Economic Base.** Strive to maintain a reasonable similarity between potential job generation and the local job market by maintaining a diverse economic base.

**Policy LU 11.5 Jobs to Housing Balance.** Strive to maintain a reasonable balance between income levels, housing types, and housing costs within the city. In future area-wide planning efforts, rather than with individual projects, recognize the importance of matching housing choice and affordability with job generation in the city, through an emphasis on the jobs-housing balance.



**Policy LU 11.6 Job Training Programs.** Collaborate with educational services, nonprofits, labor, and businesses to provide job training programs that meet the needs of businesses and industries. Help connect local businesses with programs, organizations, or educational institutions, such as NOVAworks, College of San Mateo, the San Mateo County Community College District, San Mateo Union High School District, and Small Business Development Centers.

**Policy LU 11.7 Apprenticeship Programs.** Encourage employers within San Mateo, especially building and construction companies, to evaluate hiring from or contributing to apprenticeship training programs that provide on-the-job training and are certified by the State's Division of Apprenticeship Standards (DAS).

**Policy LU 11.8 State-of-the-Art Telecommunications.** Support the development of telecommunications policies and infrastructure, including public Wi-Fi, to meet the needs of local businesses and residents and support remote work.

### ACTIONS

**Action LU 11.9 Quality Local Jobs.** Develop programs to retain and attract businesses that provide a living wage, offer health insurance benefits, and match the diverse range of education and skills of San Mateo residents.



**Action LU 11.10 Small Business Support.** Help small businesses stay and grow by offering tools and support, such as multilingual outreach, assistance accessing free educational services and financing opportunities, connecting with the Chamber of Commerce and Downtown San Mateo Association, and assistance understanding City requirements and preparing for code compliance.

**Action LU 11.11 Commercial Displacement.** Provide proactive support to local businesses affected by construction and redevelopment by communicating with business owners well in advance of construction and assisting in identifying potential locations for temporary relocation. Encourage and support the retention of existing businesses in new or renovated spaces that are a part of redevelopment projects.

**Action LU 11.12 First Source Hiring.** Explore the feasibility of establishing a First Source Hiring Program that encourages developers and contractors to make best efforts to hire new employees, workers, and subcontractors that are based in San Mateo County, and to partner with organizations that offer job training programs, such as the San Mateo County Community College District and San Mateo Union High School District.

**Action LU 11.13 Living Wage Incentives.** Maintain provisions in the Affordable Housing Commercial Linkage Fee that offer fee reductions to developers who voluntarily enter into Area Standard Wage Participation Agreements with the City.

**GOAL LU-12** Create financial stability for the City by maintaining its ability to pay for public improvements, core infrastructure, and essential services.

## POLICIES

**Policy LU 12.1 Revenue Generators.** Retain and grow existing businesses and attract new businesses that can generate and diversify the City's tax revenue and increase job opportunities to ensure the City has adequate resources for infrastructure improvements and essential City services, such as police, fire, parks, recreation, and libraries.

**Policy LU 12.2 Commercial Linkage Fee.** Maintain the City's Affordable Housing Commercial Linkage Fee assessed to new nonresidential construction that recognizes the connection between increased workers in San Mateo and increased demand for housing at all levels. Use the fees collected to support the creation or preservation of affordable housing to assist the workers who will make lower or moderate wages and cannot afford the current housing market prices.

## ACTION

**Action LU 12.3 Fiscal Neutrality.** Study the feasibility and potential impacts of adopting a Fiscal Neutrality Policy that would require new development to offset any difference between future tax revenue and the cost of City services to that development. The policy should also consider the City's goals to provide a diverse range of housing affordable to all members of the community.

## DEVELOPMENT REVIEW

New development projects in San Mateo go through a planning review process to ensure that all applicable City standards and requirements are addressed. Most development projects require a Planning Application, which is a written request for approval of a project before a building permit application can be submitted. Before a formal Planning Application, applicants usually meet with staff in the Community Development Department to discuss the scope of the project, application requirements, and applicable codes and policies. Most projects also require community outreach and engagement, usually in the form of mailed notification and a neighborhood meeting, prior to a Planning Application submittal to collect early input from residents. Larger projects can also include a Planning Commission study session. These early steps help to ensure success when a project's formal Planning Application is submitted.



Once the Community Development Department receives the plans and required application materials, the project is reviewed by other City departments, like Public Works, Parks and Recreation, Police, and Fire, for completeness and compliance with applicable codes, policies, and City requirements. During this time, the City also determines the scope of the environmental review, which could include an exemption, an Initial Study/Mitigated Negative Declaration, or an Environmental Impact Report, consistent with the California Environmental Quality Act (CEQA). After being deemed complete and finishing the environmental review process, City staff prepare findings and conditions of approval for the project. Depending on the size and scope of the project, and the type of approval being sought, final approval may come from the Zoning Administrator, the Planning Commission, or the City Council.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-13** Maintain Development Review and Building Permit processes that are comprehensive and efficient.

### POLICIES

**Policy LU 13.1 Development Review Process.** Review development proposals and building permit applications in an efficient and timely manner while maintaining quality standards in accordance with City codes, policies, and regulations, and in compliance with State requirements.



**Policy LU 13.2 Public Education.** Promote public awareness of the development review and permitting process.

**Policy LU 13.3 Fee Information.** Maintain an updated schedule of fees and housing development affordability requirements, all zoning ordinances and development standards, and annual fee or finance reports on the City's website. In addition, maintain archives of impact fee nexus studies, cost of service studies, or equivalent reports for ease of information sharing with the public.



## REGIONAL COOPERATION

Many issues addressed in the Strive San Mateo General Plan 2040 extend beyond the city boundaries; therefore, it is important to highlight the need for collaboration between the City and other public agencies on these issues. This General Plan encourages inter-agency cooperation and engagement by the City in current and long-range plans prepared by other regional agencies, such as Plan Bay Area. The Metropolitan Transportation Commission (MTC), in partnership with the Association of Bay Area Governments (ABAG), prepared Plan Bay Area 2050, which includes strategies that connect housing, the economy, transportation, and the environment. The vision of the plan is to ensure the Bay Area is affordable, connected, diverse, healthy, and vibrant for all by the year 2050. Plan Bay Area focuses on land use and transportation investments in Priority Development Areas, which are areas identified by local jurisdictions where housing and job growth will be concentrated close to public transit. San Mateo has identified five Priority Development Areas that are included in Plan Bay Area 2050.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-14** Collaborate and communicate with other public agencies regarding regional issues.

### POLICIES

- Policy LU 14.1 Interagency Cooperation.** Promote and participate in cooperative planning with other public agencies and the jurisdictions within San Mateo County, such as the 21 Elements regional collaboration, regarding regional issues such as water supply, traffic congestion, rail transportation, wildfire hazards, air pollution, waste management, fire services, emergency medical services, and climate change.
- Policy LU 14.2 Public Agency Developments.** Require developments constructed by other governmental agencies to conform to the City's General Plan, Zoning Ordinance, and other development regulations, to the extent possible.
- Policy LU 14.3 Plan Bay Area.** Remain engaged in current and future long-range plans prepared by Metropolitan Transportation Commission (MTC), Association of Bay Area Governments (ABAG), and other regional organizations to influence and be aware of projected growth assumptions for San Mateo and regional priorities for transportation, infrastructure, and the economy that could affect the city.
- Policy LU 14.4 Priority Development Areas.** Support the strategies outlined in Plan Bay Area 2050, especially within City-identified Priority Development Areas.



## GENERAL PLAN MAINTENANCE

Long-range planning in San Mateo does not end with the adoption of the Strive San Mateo General Plan 2040. To achieve the community's vision, decisions about development projects, capital improvements, specific plans, and other plans and policies affecting land use, transportation, and the physical environment will need to be consistent with this General Plan.

## GOALS, POLICIES, AND ACTIONS

**GOAL LU-15** Ensure that the City's General Plan is consistent with State law, legally adequate, and up to date.

### POLICIES

**Policy LU 15.1 General Plan Amendments.** Amendments to the General Plan shall be considered as needed. Revisions to the General Plan may be needed to ensure that elements remain consistent with each other and in compliance with State law.

**Policy LU 15.2 Specific and Master Plans.** All adopted plans, including transportation plans, Specific Plans, and Master Plans, shall be consistent with this General Plan.

### ACTIONS

**Action LU 15.3 Annual General Plan Progress Report.** Submit an Annual Progress Report on the status of the General Plan implementation to the City Council and to the Office of Planning and Research by April 1 of each year, per Government Code Section 65400.

**Action LU 15.4 Specific Plans and Master Plans.** Review all adopted Specific Plans and Master Plans and determine if updates are needed for consistency with this General Plan or if any out-of-date plans should be retired.





# CHAPTER 3

## Circulation Element









# CIRCULATION ELEMENT

## INTRODUCTION

This Circulation Element provides the policy framework for attaining a future multimodal transportation system that meets the community's needs, is sustainable, advances environmental justice, and improves the community's welfare. This element promotes a circulation system that serves the land use plan in the Land Use Element and is designed for all users and modes of transportation, welcomes innovation, and addresses the challenges of roadway improvements and parking.

For the larger Bay Area region, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) coordinate transportation and land use planning through the Regional Transportation Plan/Sustainable Communities Strategy, known as Plan Bay Area 2050. Plan Bay Area 2050 guides transportation funding and policy decisions for the region.

Transportation is the movement of people and goods and plays a significant role in a community's quality of life. A well-planned circulation system allows people and goods to get from where they are to where they want or need to go in an equitable, efficient, and timely manner. People, regardless of socioeconomic status, age, and physical ability, should be able to move around using many modes of transportation, whether that is walking, bicycling, using a mobility device, taking transit, driving, or other emerging technologies. Just as important, the circulation system plays a critical role in creating and enhancing public spaces like sidewalks, paseos, and pedestrian plazas for community interaction; providing access for goods to be transported and delivered; and managing the amount and location of parking and curbside access. With this in mind, the Circulation Element presents the priorities for developing a multimodal transportation network in the city based on a complete streets approach.

**This element addresses these eight transportation priorities:**

- Multimodal Transportation Network
- Transportation Demand Management
- Pedestrian Network
- Bicycles and Micromobility Network
- Transit Services
- Roadway Network Improvements
- Parking and Curbside Management
- Future Mobility and Technology



## RELEVANCE TO GENERAL PLAN THEMES



### Sustainability in this Element:

- Increases the safety, convenience, and appeal of walking, bicycling, and transit use to reduce reliance on gas-powered vehicles, one of the City's primary sources of greenhouse gas (GHG) emissions.
- Requires new development to include specific, measurable strategies to reduce motor vehicle trips.
- Establishes new parking management practices to support both economic growth and environmental sustainability.
- Encourages urban spaces that promote walking and multi-modal transportation improvements, through methods such as requiring sidewalks as part of new development or through the implementation of a "superblock" or similar concept in the downtown that focuses on creating car-light realms.



### Environmental Justice in this Element:

- Reduces single-occupant vehicle trips to reduce air pollution that causes acute and chronic illnesses in equity priority communities.
- Prioritizes new transportation amenities in equity priority communities based on community input and data analysis.
- Recommends safety improvements near transit stops and supports collaboration with transit agencies to improve transit services for residents who cannot drive or do not have access to a car.



### Community Engagement in this Element:

- Ensures that the City will involve the community early in the process so that future improvements in neighborhoods reflect community input.
- Engages seniors, students, transit users, community organizations, and residents of equity priority communities to provide input on solutions for different users.







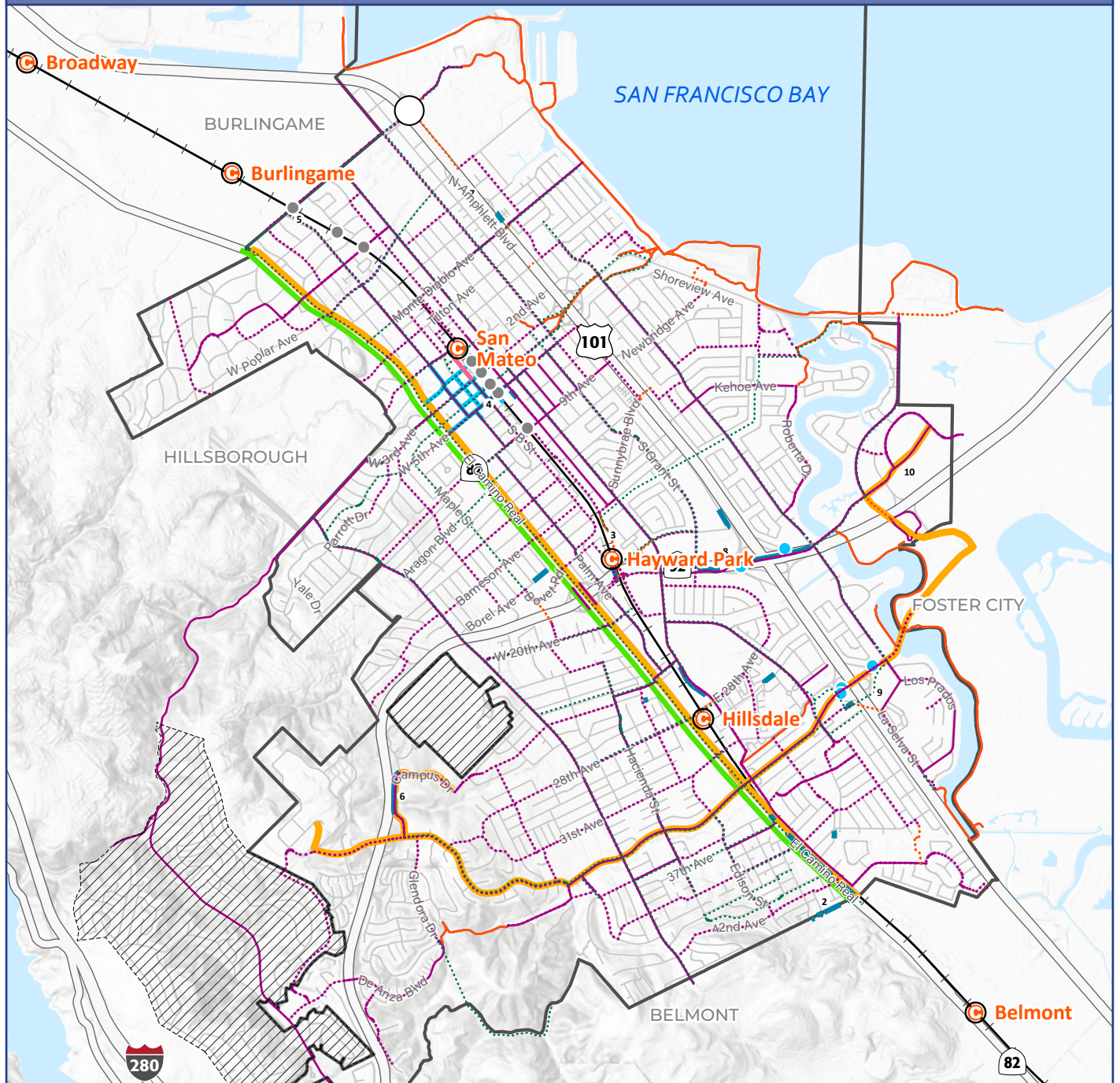
## MULTIMODAL TRANSPORTATION NETWORK

In transportation planning, “modes” refer to different ways of getting around: walking, bicycling, riding transit, and driving. A “multimodal” transportation network accommodates many different modes of transportation, while embracing complete streets principles. A complete street includes safety improvements that benefit all users (i.e., drivers, pedestrians, and bicyclists) and incorporates green infrastructure elements to improve stormwater quality. By increasing travel options that don’t rely solely on driving, GHG emissions and congestion from the transportation system can be reduced. Figure C-1 represents possible options for the 2040 Circulation Network; while the identified pedestrian, bicycle, and transit improvements may change over the lifespan of the Strive San Mateo General Plan 2040, the goal will be to complete travel gaps and maintain and improve the transportation network as the city grows.

Achievement of a multimodal transportation network requires both big-picture policy direction and focused policies and actions for infrastructure improvements. The policies and actions in this section provide a high-level approach to attain a multimodal network, with subsequent sections focused on the programmatic infrastructure policies, including those focused on biking, pedestrians, and transit use, to support such a network. In addition to this Circulation Element, the Land Use Element includes Action LU 5.3 to implement multi-modal improvements along El Camino Real.

Recognizing the importance of improving the safety of the multimodal transportation network, this element also includes a Vision Zero policy. Vision Zero is based on the five elements of a Safe Systems Approach advanced by the Federal Highway Administration to eliminate traffic fatalities and serious injuries on the roadways: safe road users, safe vehicles, safe speeds, safe roads, and post-crash care.

Figure C-1 2040 Circulation Scenario (Specific improvements may change)



### Line Improvements

- Transit Improvements
- El Camino Real Bikeway, Public Realm & BRT Improvements
- ⋯ 2012 Proposed Pedestrian Priority Network
- Existing Bikeways
- ⋯ Proposed Bikeways
- Existing Shared Bike and Ped Path
- ⋯ Proposed Shared Bike and Ped Path
- Pedestrian Improvements, Diverted Traffic
- Missing Sidewalks

### Crossing Improvements

- Proposed Peninsula Interchange Project
- Proposed Pedestrian Crossing Improvements
- Current Caltrain At-Grade Crossings

- City Limits
- Sphere of Influence
- C Caltrain Station
- Existing Pedestrian Mall (Street Closure)



00 0.25 .5 1 Miles

Source ESRI, 2022; PlaceWorks, 2022.

## TRANSPORTATION INFRASTRUCTURE FUNDING

San Mateo uses a variety of federal, State, regional, and local sources of funding for transportation infrastructure. While these funding sources fluctuate over time, they have proven to be reasonably reliable. Different sources can be used for different types of projects, and many sources are restricted to specific uses. For example:

- Federal sources, like the Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grants and the Fixing America's Surface Transportation (FAST) Act, can be used for roadway improvements, bridges, trails, and bicycle facilities.
- Funding from the California High Speed Rail Authority and the San Mateo County Transportation Authority (SMCTA) was used for Caltrain grade separation projects.
- Measure S, a local quarter-cent sales tax, can be used to fund pavement maintenance.

Individual transportation plans, such as the Bicycle Master Plan and the Pedestrian Master Plan, include detailed sections on costs and potential funding sources for the specific types of projects described.

## GOALS, POLICIES, AND ACTIONS

**GOAL C-1** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.

### POLICIES



**Policy C 1.1 Sustainable Transportation.** Reduce greenhouse gas (GHG) emissions from transportation by increasing mode share options for sustainable travel modes, such as walking, bicycling, and public transit.



**Policy C 1.2 Complete Streets.** Apply complete streets design standards to future projects in the public right-of-way and on private property. Complete streets are streets designed to facilitate safe, comfortable, and efficient travel for all users regardless of age or ability or whether they are walking, bicycling, taking transit, or driving, and should include landscaping and shade trees as well as green streets stormwater infrastructure to reduce runoff and pollution.

**Policy C 1.3 Vision Zero.** Use a safe systems approach for transportation planning, street design, operations, emergency response, and maintenance that proactively identifies opportunities to improve safety where conflicts between users exist to eliminate traffic fatalities and serious injuries in our roadways.





**Policy C 1.4 Prioritize Pedestrian and Bicycle Mobility Needs.** Prioritize local pedestrian and bicycle projects that enhance mobility, connectivity, and safety when designing roadway and intersection improvements.



**Policy C 1.5 El Camino Real.** Facilitate efficient travel and pedestrian safety along El Camino Real.



**Policy C 1.6 Transit-Oriented Development.** Increase access to transit and sustainable transportation options by encouraging high-density, mixed-use transit-oriented development near the City's Caltrain stations and transit corridors.



**Policy C 1.7 Equitable Multimodal Network.** Prioritize new amenities, programs, and multimodal projects, developed based on community input and data analysis, in San Mateo's equity priority communities.

**Policy C 1.8 New Development Fair Share.** Require new developments to pay a transportation impact fee to mitigate cumulative transportation impacts.

**Policy C 1.9 Dedication of Right-of-Way for Transportation Improvements.** Require dedication of needed right-of-way for transportation improvements identified in adopted City plans, including pedestrian facilities, bikeways, and trails.



**Policy C 1.10 Inclusive Outreach.** Involve the community in the City's efforts to design and implement a multimodal transportation system that is sustainable, safe, and accessible for all users. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.

## ACTIONS

**Action C 1.11 Complete Streets Plan.** Complete and implement the Complete Streets Plan to improve the City's circulation network to accommodate the needs of street users of all ages and abilities.

**Action C 1.12 Vision Zero Plan.** Complete and regularly update a plan that uses a safe systems approach to work towards Vision Zero and identifies specific citywide changes to policies, practices, funding, and other action items that will reduce speeding, collisions, and collision severity.



**Action C 1.13 El Camino Real Improvements.** Collaborate with Caltrans, SamTrans, and other partners to support accommodating higher-capacity and frequency travel along El Camino Real, Bus Rapid Transit, and other modes of alternative transportation.



**Action C 1.14 Transit-Oriented Development Pedestrian Access Plan.** Coordinate with interagency partners and community stakeholders to seek funding opportunities to design, construct, and build the priority projects identified in the Transit-Oriented Development Pedestrian Access Plan.



**Action C 1.15 Safe Routes for Seniors.** Develop a "safe routes for seniors" program to promote active transportation connections for seniors in collaboration with seniors' organizations. Prioritize improvements for seniors in equity priority communities.

**Action C 1.16 Residential Speed Limits.** Evaluate opportunities to reduce speed limits on residential streets to 20 miles per hour.

- Action C 1.17 Data-Driven Approach to Project Design and Prioritization.** Inform the prioritization of improvement projects through the consistent collection and analysis of modal activity data that reveals where the highest concentration of pedestrian, bicycle, and transit trips occur, and study routes and places people would like to access but are currently unable to because of limitations in pedestrian, bicycle, and transit infrastructure.
- Action C 1.18 Safety Education.** Pursue safety education to increase awareness for all street users.
- Action C 1.19 Transportation Funding.** Regularly update adopted City master plans to secure reliable funding for transportation infrastructure projects identified in these plans.
- Action C 1.20 Transportation Fees.** Adopt and maintain fees and fiscal policies to fund circulation improvements and programs equitably and achieve operational goals.
- Action C 1.21 Performance and Monitoring.** Monitor the City's mode split progress on reducing VMT and reducing GHG emissions from VMT, as data is available.

## TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is an approach that promotes the use of modes other than driving alone, using a multimodal transportation network that provides safe and accessible options for travelers. TDM programs help the City achieve its sustainability and environmental justice goals by reducing the amount of GHG emissions from vehicle trips. These programs have successfully expanded access to other transportation modes and reduced car trips in specific plan areas near the Hillsdale and Hayward Park Caltrain stations and from recent development projects. Examples of TDM strategies include providing free or subsidized transit passes for employees or residents, offering carshare discounts, offering on-site bicycle parking and repair stations, shuttle services, and other bicycle and pedestrian amenities.

San Mateo will continue to require and expand the use of TDM strategies by developing a citywide TDM ordinance, working to secure funding for new TDM programs, and educating residents, developers, employers, and employees about transportation options and incentive programs. The citywide ordinance will establish trip-reduction requirements to be met by development, include measures to consider for reaching these goals, and consider options if projects fall short of the trip-reduction requirements. Through implementation of this ordinance, the City can shift trips from single-occupancy vehicle to multiple modes, using the multimodal circulation network envisioned in this element.



## GOALS, POLICIES, AND ACTIONS

**GOAL C-2** Use transportation demand management (TDM) to reduce the number and length of single-occupancy vehicle trips through policy, zoning strategies, and targeted programs and incentives.

### POLICY



**Policy C 2.1 TDM Requirements.** Require new or existing developments that meet specific size, capacity, and/or context conditions to implement TDM strategies.

### ACTIONS

**Action C 2.2 Implement TDM Ordinance.** Develop and implement a citywide TDM ordinance for new developments with tiered trip reduction and VMT reduction targets and monitoring that are consistent with the targets in their relevant area plans. Reduce parking requirements for projects that include TDM measures.

**Action C 2.3 Education and Outreach.** Pursue education for developers and employees about programs and strategies to reduce VMT, parking demand, and the resulting benefits.

**Action C 2.4 Leverage TDM Partnership Opportunities.** Work with regional partners to identify and fund TDM strategies that can be implemented at new and existing developments.

**Action C 2.5 Facilitate TDM Services.** Facilitate the provision of TDM services to employees and residents through development agreements, Transportation Management Associations, and coordination with regional partners.

**Action C 2.6 Travel to Schools.** Reduce school-related VMT and support student health by collaborating with private and public partners to increase the number of students walking or bicycling to school through expanded implementation of Safe Routes to School, including educating students and the community about the benefits of walking and bicycling and making physical improvements to streets and neighborhoods that make walking and bicycling safer. Prioritize school travel safety improvements in equity priority communities.

**Action C 2.7 New Development Shuttle Services.** Encourage new developments to provide shuttle services as an option to fulfill TDM requirements. Shuttles should serve activity centers, such as the College of San Mateo, Caltrain stations, downtown, the Hillsdale Shopping Center, or other areas and should accommodate the needs and schedules of all riders, including service workers.

**Action C 2.8 Unbundled Parking.** Encourage residential developments to unbundle the costs of providing dedicated parking spaces. Encourage additional parking capacity created by unbundling to be reallocated as shared or public parking spaces.





## PEDESTRIAN NETWORK

A safe and easy-to-navigate pedestrian network with connections to transit, schools, commercial areas, and parks and recreation facilities provides a healthier and more sustainable way to travel. Figure C-1 shows a representation of San Mateo’s 2040 Circulation Network, which includes the existing and planned pedestrian network from the Pedestrian Master Plan. The future pedestrian network will include improvements from other adopted or future City plans, such as an updated Pedestrian Master Plan, the Transit-Oriented Development Pedestrian Access Plan, and the Complete Streets Plan.

Nearly every street in San Mateo has a sidewalk, with some exceptions in the single-family neighborhoods of San Mateo Park and Sugarloaf. Downtown includes a permanent pedestrian mall along B Street between 1st and 3rd Avenues, which is a pedestrian-only zone with space for outdoor dining and special events in the public right-of-way. Moving forward, the City plans to increase car-light spaces in the downtown by implementing elements of a “superblock” design that prioritizes pedestrian spaces. The City also plans for pedestrian improvements through the Safe Routes to School program, which encourages students and families to travel to school by means other than a car.

The City uses a data-driven approach to focus pedestrian safety improvements on the areas with the greatest need. For example, the Americans with Disabilities Act (ADA) citywide assessment evaluated City facilities, right-of-ways, and programs to identify and prioritize measures to remediate ADA deficiencies. A similar approach was undertaken to identify pedestrian improvements needed to support safe walking routes for seniors. The City’s Age Friendly Action Plan used public data to identify likely walking routes for older adults and whether sidewalk improvements were needed to improve these routes.

While this element establishes the big-picture pedestrian policy framework for San Mateo, the City has two completed implementation plans that identify projects and policies to create a more walkable future:

- The San Mateo Pedestrian Master Plan (PMP) includes a list of priority pedestrian infrastructure recommendations for corridors and intersections throughout the city. The PMP introduces a new Greenway Pedestrian Corridor Network, a pedestrian-friendly network of streets that are intended to improve pedestrian connections to neighborhood destinations, transit, and recreational opportunities. Improving the pedestrian network for all abilities and ages is one of the PMP’s primary objectives.
- The 2022 Transit Oriented Development (TOD) Pedestrian Access Plan provides a roadmap to enhance pedestrian safety and create comfortable walking routes to transit for all ages and abilities. The plan focuses on improving conditions for pedestrians around the city’s three Caltrain stations and along El Camino Real.

# GOALS, POLICIES, AND ACTIONS

**GOAL C-3** Build and maintain a safe, connected, and equitable pedestrian network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.

## POLICIES



**Policy C 3.1 Pedestrian Network.** Create and maintain a safe, walkable environment in San Mateo to increase the number of pedestrians. Maintain an updated recommended pedestrian network for implementation. Encourage “superblock” or similar design in certain nodes of the city, such as the downtown, that allows vehicle access at the periphery and limits cut-through vehicles to create pedestrian-focused, car-light spaces.



**Policy C 3.2 Pedestrian Enhancements with New Development.** Require new development projects to provide sidewalks and pedestrian ramps and to repair or replace damaged sidewalks, in addition to right-of-way improvements identified in adopted City master plans. Encourage new developments to include pedestrian-oriented design to facilitate pedestrian path of travel.



**Policy C 3.3 Right-of-Way Improvements.** Require new developments to construct or contribute to improvements that enhance the pedestrian experience, including human-scale lighting, streetscaping, and accessible sidewalks adjacent to the site.

## ACTIONS

**Action C 3.4 Implement Pedestrian Improvements.** Prioritize implementation of goals, programs, and projects in the City’s adopted plans that improve the comfort, safety, and connectivity of the pedestrian network.

**Action C 3.5 Pedestrian Trails and Routes Awareness.** Increase awareness of existing trails and routes by working with outside agencies and developers to promote these amenities to residents. Continue collaborating with the County on development of the trail network.

**Action C 3.6 Access for Users of All Ages and Abilities.** Implement the ADA Transition Plan and maintain accessible streets and sidewalks. Use ADA requirements when implementing design standards.

**Action C 3.7 Pedestrian Connectivity.** Incorporate design for pedestrian connectivity across intersections in transportation projects to improve visibility at crosswalks for pedestrians and provide safe interaction with other modes. Design improvements should focus on increasing sight lines and removing conflicts at crosswalks.

**Action C 3.8 Safe Routes to School.** Fund and implement continuous Safe Routes to School engagement and improvements with San Mateo elementary, middle, and high schools, and provide support to increase number of students walking and bicycling to school.

**Action C 3.9 Downtown Pedestrian Mall.** Complete design and fund improvements to fully transition B Street between 1st Street and 3rd Street into a pedestrian mall.

## BICYCLES AND MICROMOBILITY NETWORK

Biking or traveling by other micromobility devices is an efficient, healthy, and sustainable mode of travel. Micromobility devices are small, lightweight, and typically low-speed, such as bicycles, electric-assisted or electric bicycles and scooters, hoverboards, and skateboards. Infrastructure supporting bicycling and micromobility devices complements the pedestrian network, and it is an important component of the city's multimodal transportation system.

Bicycles and micromobility devices allow people to reach destinations that they might otherwise drive to, and are well-suited for shorter trips that comprise the majority of San Mateans' transportation needs. They also help travelers complete their first- and last-mile transit connections, closing a travel gap that many people find too far to walk because of time constraints, safety concerns, and mobility issues. San Mateo's existing bicycle network provides some connections to destinations within the city and to neighboring city bikeway networks. The City's Bicycle Master Plan describes the existing and proposed bikeway network in more detail and includes programs and policies to help implement the goals outlined in the plan. In implementing the Bicycle Master Plan, the City will continue to build a safe and efficient bicycle and micromobility network.

The San Mateo bicycle network contains six classifications of existing and planned bicycle facilities as described herein. The classifications are described in order of the level of separation between bicyclists and motorists. Shared-use paths offer the most separation, while bicycle routes would require bicyclists to ride alongside motorists.

- **Shared-use paths (Class I):** Off-road pathways designed for people walking, biking, and rolling (e.g., skateboard or scooter).
- **Separated bike lanes (Class IV):** A designated lane separated from vehicular traffic by a buffer with vertical protection (e.g., flexible posts, planters, parked vehicles, curbs).
- **Buffered bike lanes (Class II):** A designated bicycle lane adjacent to vehicular traffic separated by a striped buffer area on the pavement.
- **Standard bike lanes (Class II):** A designated bicycle lane directly adjacent to vehicular traffic.
- **Bicycle boulevards (Class III):** Bicyclists share a lane with vehicular traffic and are identified with bicycle signage and pavement markings to increase driver awareness of bicyclists and aid bicyclists with navigation; however, bicycle boulevards include traffic-calming treatments and are solely implemented on low-speed (i.e., less than 25 miles per hour) and low-volume (i.e., less than 3,000 vehicles per day) streets to ensure they are low-stress facilities.
- **Bicycle routes (Class III):** Bicyclists share the lane with vehicular traffic and are identified with bicycle signage and pavement markings to increase driver awareness of bicyclists and aid bicyclists with navigation. The City is phasing out this type of route within the bicycle network and upgrading to other facility types.





## GOALS, POLICIES, AND ACTIONS

**GOAL C-4** Build and maintain a safe, connected, and equitable bicycle and micromobility network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.

### POLICIES



**Policy C 4.1** **Bicycle Network.** Create and maintain a bicycle-friendly environment in San Mateo and increase the number of people who choose to bicycle.



**Policy C 4.2** **Bicycle Master Plan.** Maintain an updated recommended bicycle network for implementation in the adopted Bicycle Master Plan and related City plans.



**Policy C 4.3** **First- and Last-Mile Connections.** Encourage and facilitate provision of bicycle parking and shared mobility options at transit centers and other community destinations to provide first- and last-mile connections.

**Policy C 4.4** **Bicycle-Related Technology.** Explore ways to use technology to improve bicycle safety and connectivity.



**Policy C 4.5** **Bicycle and Shared Mobility-Related Technology.** Explore ways to use technology to improve bicycle and shared mobility safety and connectivity.



**Policy C 4.6** **Bicycle Improvements.** Require new developments to construct or contribute to improvements that enhance the cyclist experience, including bicycle lanes.



**Policy C 4.7** **Coordination with Other City Projects.** Maximize opportunities to implement bicycle facilities through other City of San Mateo projects.



**Policy C 4.8** **Interjurisdiction Coordination.** Continue to coordinate with adjacent jurisdictions and regional partners in the development of connected bicycle and pedestrian facilities and regional trails, as identified in adopted City plans.

### ACTIONS

**Action C 4.9** **Bicycle Master Plan Implementation.** Implement the Bicycle Master Plan's recommended programs and projects to create and maintain a fully connected, safe, and logical bikeway network and coordinate with the countywide system. Update the Bicycle Master Plan and related adopted City plans to reflect future bicycle and micromobility facility needs to support the City's circulation network.

**Action C 4.10** **Paving Coordination.** Coordinate and fund the implementation of bicycle facilities and pedestrian improvements identified in the Bicycle and Pedestrian Master Plans with the City's paving program.

- Action C 4.11 Connectivity Across Freeway Barriers.** Conduct feasibility studies and design alternatives for overcrossings and undercrossings at US Highway 101 and State Route 92 to facilitate connectivity across major barriers.
- Action C 4.12 Bay Trail.** Identify State and County programs to maintain safe pedestrian and bicycle access to and extension of the San Francisco Bay Trail through coordination with neighboring jurisdictions.
- Action C 4.13 Crystal Springs.** Pursue safe pedestrian and bicycle access to San Francisco Water District lands via Crystal Springs Road through coordination with the Town of Hillsborough and with State and County assistance.
- Action C 4.14 Bicycle Detection Devices.** Install signal modifications on existing and planned bikeways to detect bicyclists and micromobility users' presence at intersections and facilitate their safe movement through the intersection.
- Action C 4.15 Increased Bicycle Capacity on Caltrain and SamTrans.** Coordinate with Caltrain and SamTrans to support/increase bicycle capacity on transit vehicles and to provide an adequate supply of secure covered bicycle and micromobility parking at Caltrain stations, transit centers, and major bus stops.





## TRANSIT SERVICES

Public transit plays an important role in the multimodal transportation network by providing an efficient and affordable transportation option, offering equitable, economic, and community health benefits. Transit providers' primary objectives are to increase mobility options, reduce congestion, improve the environment by reducing GHG emissions, and contribute to the region's economic success by connecting workers, visitors, and other travelers to their destinations. Transit service is most successful in reaching these goals when there is a land use pattern focusing housing and jobs near transit, as the General Plan Land Use Map (Figure LU-1 in the Land Use Element) aims to do.

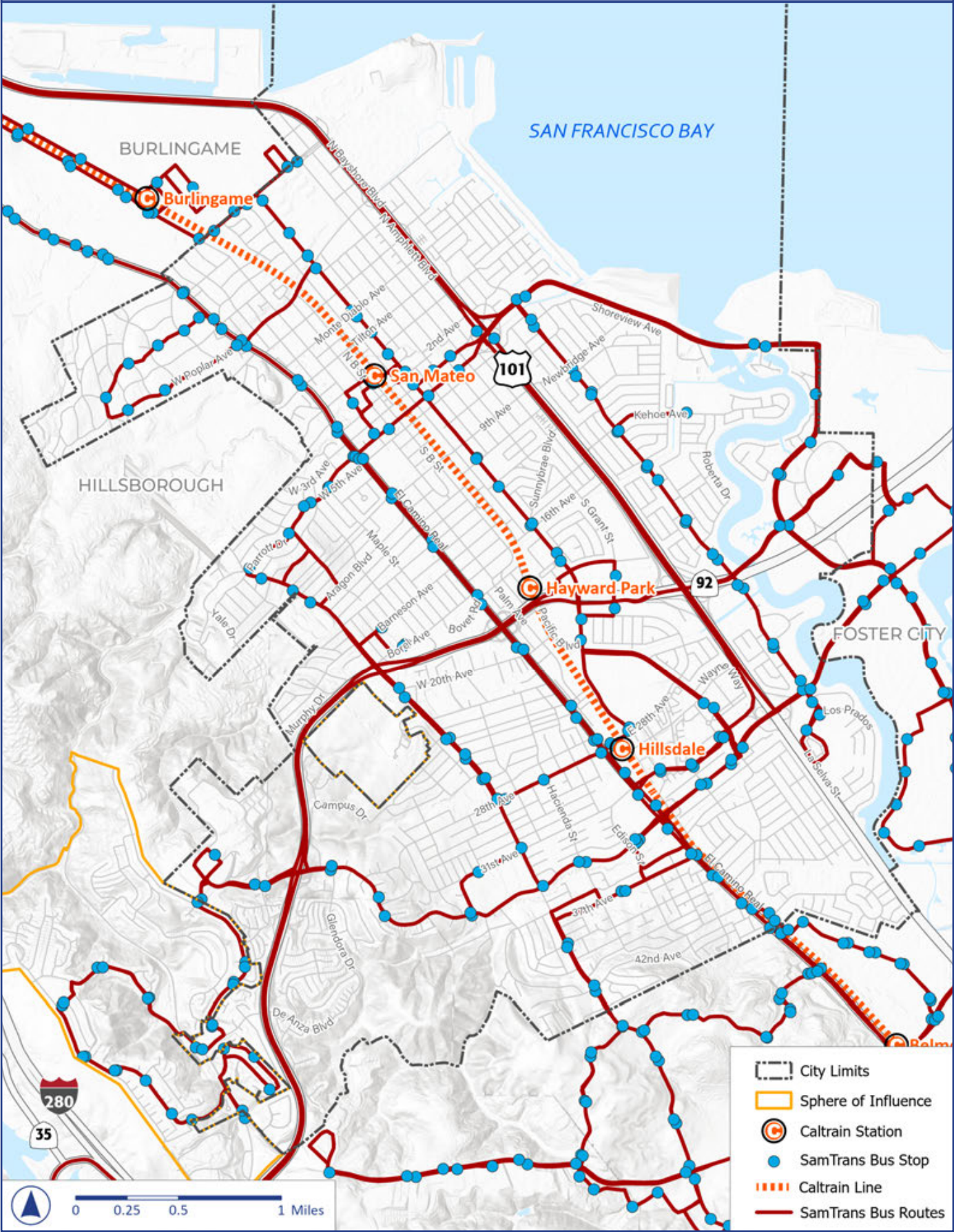
Local transit services are primarily provided by Caltrain, a commuter rail system, and SamTrans, a public bus service. Additional shuttle services are funded by various agencies and private companies that offer first- and last-mile connections from Caltrain stations. Figure C-2 shows the Caltrain stations and SamTrans bus stops and routes within San Mateo as of 2023.

Caltrain provides multiple connections to other transit operators around the Bay Area, enabling travelers to reach regional destinations. In San Mateo, Caltrain has three stations: San Mateo Station, Hayward Park Station, and Hillsdale Station, of which, the Hillsdale Station has express service (i.e., Baby Bullet). To improve commuter rail service, Caltrain adopted the Caltrain 2040 Long Range Service Vision to guide the long-range development of rail service. The Vision plans for a future with substantially expanded rail service and new regional and mega-regional connections and includes a business plan to work towards the vision. As an immediate effort to improve service, Caltrain is working on the Peninsula Corridor Electrification Project, which will provide increased service throughout the network and provide the infrastructure needed for High-Speed Rail.

There are multiple SamTrans bus routes that operate within and through the City Limits. These routes connect to Caltrain and Bay Area Rapid Transit (BART) stations, and local and regional destinations, such as the San Mateo Central Park, Downtown, Hillsdale Shopping Center, and San Francisco International Airport. SamTrans' long-range service plan, called ReImagine SamTrans, plans for operational improvements such as increased bus frequency and new routes and connections, including enhanced transit access on the El Camino Real corridor.



Figure C-2 Transit Routes



Source: ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.





Although the City does not directly provide transit service, there are many things the City can do to make it easier, safer, and more appealing to use transit in San Mateo. The City's Complete Streets Plan includes policy guidance and proposes improvements for pedestrian, bicycle, and micromobility connections to transit. Further, the Transit-Oriented Development Pedestrian Access Plan identifies specific improvements to enhance pedestrian access to the City's current transit stations. Creating a circulation system that improves access to transit centers and stops, requiring new development projects to include transit supportive features, and working collaboratively with the transit providers to improve the system will bolster transit service in the community.

The City can also support transit providers to make improvements that would encourage ridership, such as:

- Transit priority treatments, such as signal priority, on high-frequency transit corridors.
- Extended hours to provide service for shift workers.
- Free Clipper cards to youth/students.
- Bus rapid transit (BRT), on-demand transit, or microtransit services in San Mateo.
- Caltrain modernization, electrification, transit experience improvements, and increased service frequency.
- Implementation of Caltrain's business plan, including increased service to San Mateo's three stations.
- Caltrain station access improvements such as sidewalks and bikeways near each station that are designed to provide safe and convenient access to and from transit.
- Regional transit integration and expansion to improve seamless access to BART, High-Speed Rail, and other regional transit systems.

## GOALS, POLICIES, AND ACTIONS

**GOAL C-5** Make transit a viable transportation option for the community by supporting frequent, reliable, cost-efficient, and connected service.

### POLICIES



**Policy C 5.1** **Transit Ridership.** Support SamTrans and Caltrain in their efforts to increase transit ridership.



**Policy C 5.2** **Caltrain.** Support Caltrain as a critical transit service in the city and Peninsula.



**Policy C 5.3** **California High-Speed Rail.** Support and facilitate local and regional efforts to implement High-Speed Rail. Work to provide multimodal connections between San Mateo and planned High-Speed Rail stations.

**Policy C 5.4** **Safety at At-Grade Rail Crossings.** Eliminate existing at-grade rail crossings to improve safety and local multimodal circulation.



**Policy C 5.5** **Transit Improvements.** Support implementation of transit improvements by local and regional transit providers.



**Policy C 5.6** **Transit Safety.** Prioritize improvements to increase safety, access, and comfort at transit centers and bus stops in equity priority communities, along commercial corridors, and in dense, mixed-use neighborhoods.



**Policy C 5.7** **Transit Access in New Developments.** Require new development projects to incorporate design elements that facilitate or improve access to public transit.

**Policy C 5.8** **Transit Education.** Educate the public about the benefits of transit use.

### ACTIONS

**Action C 5.9** **Grade Separation Study.** Conduct a grade separation feasibility study for all at-grade rail crossings in San Mateo. Identify funding to complete these grade-crossing improvements.



**Action C 5.10** **Transit Experience Improvements.** Prioritize installing new transit shelters and benches or other seating and an energy-efficient street lighting program at transit stops in equity priority communities and areas that improve transit access, safety, and experience.



**Action C 5.11** **Shuttle Programs.** Continue to support public shuttle programs connecting to Caltrain stations. Work to expand public awareness and access to shuttles and expand shuttle service. Support the implementation of publicly accessible private shuttles.



## ROADWAY NETWORK IMPROVEMENTS

A well-planned roadway network is key to supporting safe and efficient travel for all users and accomplishing the transition to a multimodal system, as described throughout this element. Different modes of transportation have different infrastructure needs; by prioritizing improvements that support multiple modes, the City can meet the needs of multiple users. For example, adding bicycle lanes can make bicycling safer and more convenient, encouraging more people to bike instead of drive while also reducing traffic congestion for those who do drive. Another example is lowering vehicle speeds and installing traffic-calming measures in residential neighborhoods improves safety for all roadway users, making walking and bicycling more viable transportation options.

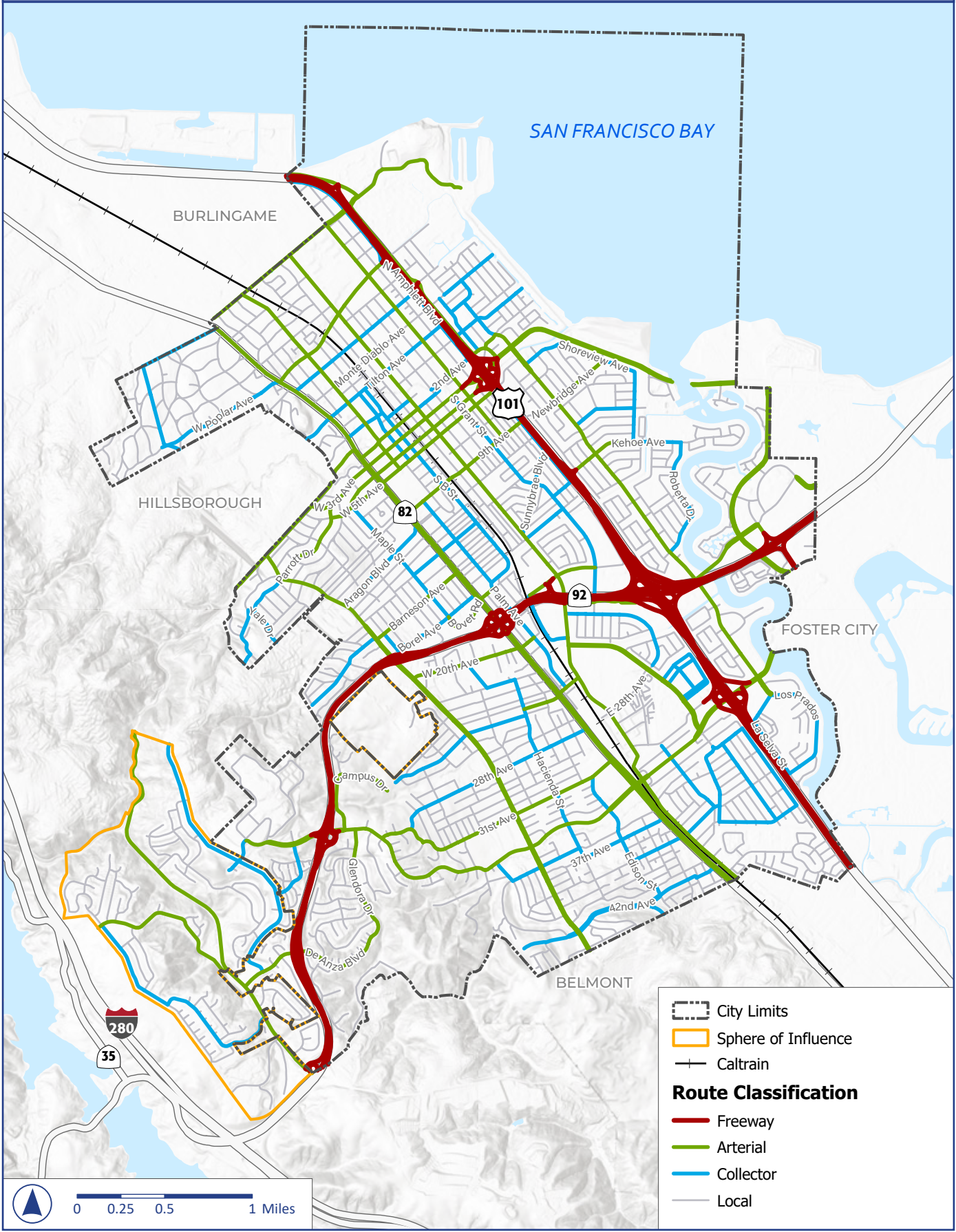
To identify future improvements needed to support the shift to a truly multimodal roadway network, the City will evaluate and consider adopting a Multimodal Level of Service (MLOS) standard or other transportation metric. MLOS is a rating system used to evaluate roadway operation efficiency for vehicles, pedestrians, bicyclists, transit, and other roadway users in place of Level of Service standards that consider vehicles only.

Decisions about appropriate improvements are also made based on the role of a roadway within the city's network. The City uses roadway classifications to define the function of various street types in the transportation network, monitor performance, track multimodal use, and plan for improvements needed to accommodate changes in traffic over the life of the Strive San Mateo General Plan 2040. Roadway improvements may include traffic signal installation, signal timing adjustments for different modes, and upgrading traffic signals to give priority to emergency vehicles. Some funding sources for roadway maintenance and improvements can only be used for specific roadway classifications. Figure C-3 shows the roadway classifications in San Mateo:

- **Local Streets and Alleyways.** Local streets and alleyways make up the majority of the roadway system and typically have lower speeds and vehicular traffic volumes.
- **Collectors.** Collectors link neighborhoods together and allow travelers to reach places outside of their neighborhoods. They have higher speeds than local streets and can handle more traffic volume. Collectors are important segments of San Mateo's existing and proposed bikeway network.
- **Arterials.** Arterial streets connect the regional roadway network with collectors. Most intersections along arterials are signalized, often with a coordinated and interconnected signal system. Compared to collectors, arterials have higher capacity to accommodate traffic volumes, and they provide for longer, continuous movement throughout the city.
- **Freeways.** Freeways are high-speed roadways without intersections that allow users to reach destinations outside of the city, either by car or transit. US Highway 101 and State Route 92 run through the city, while Interstate 280 is just west of the City Limits.

In addition to planning and building physical improvements to the roadway network, the City is also responsible for maintaining streets, bridges, bicycle paths, signage, lighting, sidewalks, and other transportation facilities so that all users can travel safely and efficiently. Preventative maintenance of roadways and infrastructure keeps costs lower in the long term, and results in accessible, safe, and easy to navigate surfaces that improve conditions for motorists, bicyclists, and pedestrians.

Figure C-3 Street Classification



Source: ESRI, 2022; PlaceWorks, 2023.  
 Note: This map is included for informational purposes and is not adopted as part of this General Plan.



Roadway improvements and congestion reduction in San Mateo require a collaborative approach because the roadway network is regulated by multiple entities with roles that sometimes overlap. For example, US Highway 101, State Route 92, and El Camino Real (State Route 82) are all Caltrans facilities that are not controlled by the City. At the regional level, the City/County Association of Governments of San Mateo County (C/CAG), the Congestion Management Agency for the County, is responsible for developing and updating a variety of transportation plans and programs while the San Mateo County Transportation Authority (SMCTA) is an independent agency that administers funding generated by the voter-approved countywide transportation sales tax. At the local level, the City of San Mateo Public Works Department operates, maintains, and improves City-owned infrastructure, including roadways, bicycle facilities, and pedestrian facilities.

## GOALS, POLICIES, AND ACTIONS

**GOAL C-6** Achieve a transportation system that prioritizes user safety, accommodates future growth, reduces VMT per capita, and maintains efficient and safe operations for all modes and all residents.

### POLICIES

- Policy C 6.1 Roadway Operations.** Maintain acceptable roadway operations for all intersections and all modes within the city.
- Policy C 6.2 Circulation Improvement Plan.** Maintain a transportation network that will accommodate future growth, reduce VMT per capita, and equitably implement complete streets.
- Policy C 6.3 Local Transportation Analysis.** Require site-specific transportation impact analysis following the City's adopted Transportation Impact Analysis (TIA) Policy for development projects where there may be an adverse condition or effect on the roadway system.



- Policy C 6.4 Operations Analysis for Development Projects.** Require new development to determine the need for new or modified circulation improvements, operations, or alignments where developments identify operational deficiencies that were not previously identified in a transportation impact fee study. Require development applicants to prepare an analysis to determine the need for modifications, such as signalization, turn restrictions, roundabouts, etc. Require applicants to fund identified off-site improvements if warranted, as determined by the appropriate transportation analysis, and as approved by City staff.
- Policy C 6.5 Neighborhood Traffic.** Implement traffic-calming measures on residential streets to reduce the volume of pass-through traffic and vehicular speeds.
- Policy C 6.6 Truck Routes.** Maintain and update the truck route network to use roadways that are adequately designed for truck usage and minimize potential conflicts with other transportation modes.
- Policy C 6.7 Capital Improvement Program.** Prioritize improvements that increase person throughput in project prioritization to reduce VMT.
- Policy C 6.8 Emergency Signal Preemption.** Require new and upgraded signals to include preemption for emergency vehicles to maintain and enhance emergency response times.

## ACTIONS

- Action C 6.9 Network Operations Standard.** Evaluate and adopt an operational metric for all roadway users that accounts for the safe, equitable, and efficient roadway access.
- Action C 6.10 Prioritization and Timing of Roadway Improvements.** Revise the Capital Improvement Program (CIP) prioritization system to include additional criteria, such as: potential to reduce vehicle miles traveled (VMT) per capita; proximity to high-injury locations identified in the Local Roads Safety Plan; eligibility and availability of grant or other funding source; benefit or harm to equity priority communities; and correlation with the distribution and pace of development, reflecting the degree of need for mitigation.
- Action C 6.11 Congestion Management.** Work with neighboring agencies and regional partners, such as the City/County Association of Governments of San Mateo County (C/CAG), to implement traffic management strategies and technologies, such as signal coordination, to manage local traffic congestion.



## PARKING AND CURBSIDE MANAGEMENT

Driving is part of a multimodal transportation network, which requires consideration of vehicle parking. Efficient management of parking is important to support economic growth, environmental sustainability, and transportation equity. Many San Mateo residents currently drive to their destinations, which leads to demand for vehicle parking. However, parking requires valuable real estate, whether on-street, off-street, or at the curb, and making parking abundant and readily available may encourage additional vehicle trips. As the competing demands for land increase, the City is exploring strategies that manage the curbside and leverage innovative tools and technologies that support a more sustainable and equitable parking system to more fully support the multimodal network.

On-street parking is often in high demand by motorists who prefer to park near their destination. The on-street public right-of-way has competing priorities throughout the city, necessitating decisions about how to best allocate this limited space for vehicle circulation, parking, bicycling, pedestrians, parklets, and loading. Effective curb management strategies, such as maintaining flexible curb space that can be easily used for multiple purposes, can help the City meet these future needs for this critical right-of-way.

New development projects evaluate and provide parking that is appropriate for all travel modes, and the City operates public off-street parking structures within the Downtown core. Space or structures for parking add significant cost to new development, which translates into higher rents for residents and businesses, and also encourages driving. In some cases, sharing parking resources can help to reduce both the amount of parking provided on-site as well as the cost of building. Provision of parking at levels that meet needs without inducing additional trips or hindering development is a key part of the City's future multimodal network.

Parking, especially structured parking, is very expensive to build and is a significant factor in the cost of new development. As one strategy to reduce the cost of building needed new housing, California has explored State laws that limit local governments' ability to require parking as part of new development. For example, in 2022, California passed Assembly Bill (AB) 2097, which prohibits minimum parking requirements for most development projects within a half-mile radius of a major transit stop. As the State continues to grapple with solutions to California's housing crisis, it is possible that there could be additional future legislation that affects parking requirements and regulations in San Mateo.

## GOALS, POLICIES, AND ACTIONS

**GOAL C-7** Use parking, enforcement, and curb management strategies to effectively administer parking supply and maximize use of public assets.

### POLICIES



**Policy C 7.1** **Parking Management.** Manage parking through appropriate pricing, enforcement, and other strategies to support economic growth and vitality, transportation equity, and environmental sustainability. Ensure that the available parking supply is used at levels that meet ongoing needs without inducing additional demand or hindering future development.



**Policy C 7.2** **Shared Parking.** Encourage new and existing developments, especially those in mixed-use districts, to share parking between uses to maximize the existing parking supply, minimize the amount of new parking construction, and encourage “park once” behavior in commercial areas.

**Policy C 7.3** **Public Parking.** Maximize opportunities to expand the availability of existing parking by supporting the use of public/shared parking at private developments, discouraging reserved parking at new developments, providing incentives for developments to include shared/public parking, and allowing developers to fund public parking in-lieu of meeting parking demand/requirements on-site.



**Policy C 7.4** **Bicycle Parking.** Require the provision of bicycle parking as part of new private developments.

**Policy C 7.5** **Curbside Management.** Manage the supply and use of the curb to maintain an optimal balance between mobility, storage, placemaking, and loading uses allowing for flexibility for adaptive re-use, safety improvements, and activation of curb space whenever possible.

**Policy C 7.6** **Loading for New Development.** Require adequate loading to meet the needs of new development, including evaluation of shared use of loading zones.

### ACTIONS

**Action C 7.7** **Parking Requirements.** Evaluate options to amend minimum parking requirements, consistent with State and regional policy, to provide parking appropriate to the context of the development and support the multimodal transportation network, such as parking maximums or parking demand analyses.

**Action C 7.8** **Parking Management Strategies.** Deploy enhanced parking management strategies, parking enforcement, and evaluate dynamic parking pricing strategies that fluctuate based on peak parking and/or district-level parking demands.



- Action C 7.9 Curbside Management Strategies.** Evaluate and implement curb management strategies, such as incentivizing or discouraging certain types of trips, mode choices, and behaviors in favor of broader mobility goals.
- Action C 7.10 Emerging Technology for Curbside Management.** Evaluate and implement performance monitoring and evaluation systems, such as digitization of curbside assets, to dynamically manage evolving curbside demands.
- Action C 7.11 Truck Loading.** Evaluate and implement ways to reduce conflicts between truck loading and pedestrian, bicycle, and transit networks.
- Action C 7.12 Public Bicycle Parking.** Install safe, useful, and convenient short- and long-term bicycle parking facilities in the public right-of-way or near key destinations, City facilities, and transit facilities.
- Action C 7.13 Mechanical Parking Lift.** Adopt and maintain a code or policy that sets standards for mechanical parking lift systems.

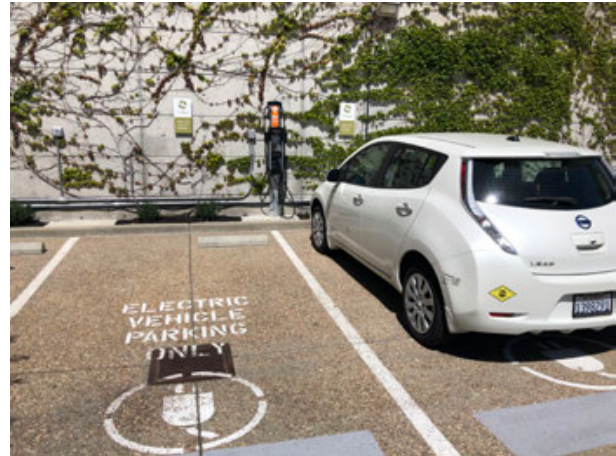
## FUTURE MOBILITY AND TECHNOLOGY

Transportation technology is an important component in transportation network management today. Intelligent transportation systems allow for improved emergency response times, congestion relief, and safety benefits for all users. Active network management can share real-time information with roadway users to help inform their travel patterns. Technology will continue to be important to help manage future increased demand on the City's transportation network.

Additionally, advancement in mobility technologies and services is fueling rapid changes in travel behavior, transportation options, and land use. Future transportation technologies, such as autonomous vehicles (AVs), electric-assist bicycles and scooters, shared mobility options, micromobility devices, ride sharing, advancements in transit operations, and other transportation innovations, will greatly impact the future of mobility by:

- Expanding public transit service and connections to transit
- Affecting whether and how often people drive
- Increasing or decreasing VMT
- Changing how deliveries are made and how goods travel along the transportation network.

As new transportation innovations emerge, the City will work to ensure equitable deployment and responsive transportation solutions to accommodate technology that supports the multimodal goals in this element. At a regional level, the City will continue collaborating with Caltrain and SamTrans to improve transit operations in San Mateo as new technologies come online.



## GOALS, POLICIES, AND ACTIONS

**GOAL C-8** Build a values-driven regulatory, management, and partnership framework that flexibly encourages emerging transportation technologies in service of City and community goals.

### POLICIES



**Policy C 8.1 Emerging Technologies.** Monitor, evaluate, test, and implement new technologies that expand options for safe and efficient trip making.



**Policy C 8.2 Equitable Mobility Options.** Ensure that the needs and perspectives of residents of equity priority communities as well as those who speak limited English, and low-income, senior, and disabled travelers are considered in the design, deployment, and management of new mobility services and technologies.

**Policy C 8.3 Mobility Data.** Leverage mobility data to support new policies, investments, and programmatic actions in service of City goals.

### ACTIONS

**Action C 8.4 Umbrella Regulations for Modern Mobility.** Develop comprehensive regulations and infrastructure standards that are not exclusive to specific service providers and that support a spectrum of digital information, micromobility services, and emerging technologies, such as autonomous vehicles.



**Action C 8.5 Strategic Partnerships and Pilots.** Create strategic partnerships and pilots with shared mobility service providers and community organizations that increase mobility options for residents.

- Action C 8.6 Future-Ready Infrastructure.** Establish public realm policies and tools that reflect San Mateo’s goals and priorities in the design and management of streets, curbs, sidewalks, and parking facilities to account for emerging mobility trends and changes in demand over time.
- Action C 8.7 Equitable Mobility Technology.** Develop an equitable mobility policy, including a data-sharing policy, for vendors to ensure equitable deployment of emerging mobility options with consideration of residents who may be digitally challenged.
- Action C 8.8 Intelligent Transportation Systems.** Evaluate and deploy Intelligent Transportation Systems (ITS) measures to efficiently manage traffic operations and incident response, enhance transit service efficiency, and better detect and prioritize the travel and safety of people walking and biking.





# CHAPTER 5

## Community Design and Historic Resources Element









# COMMUNITY DESIGN AND HISTORIC RESOURCES ELEMENT

## INTRODUCTION

The Community Design and Historic Resources Element sets the policy framework for San Mateo's physical form, which is shaped first by nature and then by human factors. The natural context that has shaped the community and its history includes the city's topography, sloping from the undeveloped foothills to the San Francisco Bay, as well as the urban forest. Human factors in San Mateo's community design includes the architecture of historic and new buildings, the public spaces where people gather, gateways or entrances to the city, street trees lining neighborhoods, and art decorating public spaces. Urban design distinguishes the characteristics of specific areas, like residential neighborhoods and shopping districts, through differences in landscaping, building size and orientation, and treatment of access, entryways, and parking. Archaeological resources and cultural resources that are culturally significant to Native American tribes also serve as important connections to the city's rich history.

This element includes goals, policies, and actions focused on improving the city's urban tree canopy, enhancing the visual and architectural character of mixed-use and commercial areas, and encouraging the design of residential buildings that complement the neighborhood's visual and architectural character. It also includes guidance for the preservation of historic, archaeological, and cultural resources that help maintain San Mateo's unique identity. This element encourages new mixed-use and commercial development that respects the scale and rhythm of the surrounding buildings and provides human-scale design that cultivates pedestrian activity.

The Community Design and Historic Resources Element addresses the following:

- Natural Setting and the Urban Forest
- Archaeological and Paleontological Resources and Tribal Cultural Resources
- Historic Resources
- City Placemaking
  - » Sustainable Design
  - » Gateways
  - » Corridors
  - » Public Art
- Elements of Design
  - » Residential Neighborhoods
  - » Mixed-Use and Commercial Areas





## RELEVANCE TO GENERAL PLAN THEMES



### **Sustainability in this Element:**

- Encourages sustainable design features and elements into the design of new buildings.
- Supports new development that respects and responds to the natural topography of San Mateo and minimizes grading.
- Promotes the preservation of protected heritage trees and requires tree planting for new developments, which helps sequester carbon from the atmosphere.
- Supports the preservation of historic resources by retaining existing buildings, which reduces the consumption of new construction materials, uses less energy, and sends less waste to landfills.



### **Environmental Justice in this Element:**

- Adds climate-adapted trees in neighborhoods with less street tree canopy.
- Explores funding sources and other forms of City support for low-income homeowners to plant and/or replace trees on their properties.



### **Community Engagement in this Element:**

- Collaborates with Native American representatives to identify locations of importance to Native Americans, including archaeological sites, sacred sites, traditional cultural properties, and other types of tribal cultural resources.
- Increases public appreciation of historic resources by supporting groups and organizations who provide neighborhood workshops, public presentations, interpretive signage, and walking tours.
- Supports community involvement in the City's efforts to develop and maintain an attractive urban fabric that reflects San Mateo's unique visual and architectural character.
- Encourages the use of outreach and engagement methods that include broad representation and are culturally sensitive.



## NATURAL SETTING AND THE URBAN FOREST

The natural setting of San Mateo is the foundation of its unique character and sense of place. San Mateo is set between two dominant physical features: San Francisco Bay and the ridge of hills along the western border. The city has developed between these two natural features following early transportation corridors, and the bay and western hills remain important natural views from many places in the city. Other key natural features of San Mateo include Coyote Point County Park, the Marina Lagoon, San Mateo Creek, and Laurelwood/Sugarloaf Park. The city also has a 3-mile length of shoreline along the San Francisco Bay, which includes a scenic vista point at Seal Point Park. San Mateo County's General Plan also designates the area surrounding Interstate (I-) 280 as a scenic corridor.

The City's urban forest—including both public and privately owned trees—is also a key part of the community's identity and quality of life. Trees contribute to the visual character of a neighborhood and can improve the aesthetics in commercial areas. Regular spacing of trees that are similar in form and texture provides order and coherence and gives scale to the street. A canopy of branches and leaves creates a sense of enclosure and comfort and provides shade, which will be increasingly important not only for aesthetics but for reducing building energy use and the urban heat island effect in a warming climate. While some city streets, such as Aragon Boulevard between El Camino Real and Maple Street, are lined with trees, the tree canopy is sparse in other areas.

This section provides policy direction for preserving and enhancing San Mateo's natural setting, minimizing the impact of hillside development, and protecting and improving the urban tree canopy. Goals and policies focused on access to nature and open space lands, natural resources, and parks and recreation can be found in the Conservation, Open Space, and Recreation Element. Strategies to combat climate change are further discussed in the Land Use Element and in the City's Climate Action Plan.



## GOALS, POLICIES, AND ACTIONS

**GOAL CD-1** Preserve and enhance San Mateo’s natural setting as an irreplaceable asset that is the physical foundation of the community.

### POLICIES



**Policy CD 1.1** **Respect for the Landscape.** Encourage new development to respect and respond to the natural topography of San Mateo.

**Policy CD 1.2** **Preservation of Natural Views.** Preserve and enhance, to the extent feasible, publicly accessible views to the undeveloped foothills and the San Francisco Bay through the design of new development.

**Policy CD 1.3** **Scenic Corridors.** Require new development adjacent to designated scenic corridors within San Mateo County’s General Plan to protect and enhance the visual character of these corridors.

**GOAL CD-2** Minimize the impact of hillside development on the natural environment and public safety.

### POLICIES

**Policy CD 2.1** **Hillside Development Principles.** Require hillside development to minimize impacts by preserving the existing topography, limiting grading or cuts and fills, clustering development, and identifying opportunities for restoration or re-wilding. Limit development on steep hillsides with a 30 percent or higher slope.

**Policy CD 2.2** **Minimal Impacts.** Require new development to preserve natural topographic forms and to minimize adverse impacts on vegetation, water, soil stability, and wildlife resources.

**GOAL CD-3** Protect heritage trees, street trees, and tree stands and maintain the health and condition of San Mateo’s urban forest.

### POLICIES



**Policy CD 3.1** **Tree Preservation.** Continue to preserve heritage and street trees throughout San Mateo, where feasible.





**Policy CD 3.2 Replacement Planting.** Require appropriate replacement planting or payment of an in-lieu fee when protected trees on public or private property are removed.



**Policy CD 3.3 Tree Protection During Construction.** Require the protection of trees during construction activity; require that landscaping, buildings, and other improvements adjacent to trees be designed and maintained to be consistent with the continued health of the tree.



**Policy CD 3.4 Public Awareness.** Pursue public awareness and education programs concerning the identification, care, and regulation of trees.



**Policy CD 3.5 Tree Maintenance.** Preserve and regularly maintain existing City-owned heritage and street trees to keep them in a safe and healthy condition.



**Policy CD 3.6 New Development Street Trees.** Require street tree planting where feasible as a condition of all new developments.



**Policy CD 3.7 Street Tree Equity.** Plant new street trees to increase the tree canopy throughout the city, especially in gateway areas and in tree-deficient neighborhoods; encourage neighborhood participation in tree planting programs.



**Policy CD 3.8 Tree Stand Retention.** Preserve the visual character of stands or groves of trees in the design of new or modified projects, where feasible.

## ACTIONS



**Action CD 3.9 Urban Tree Canopy.** Identify neighborhoods with less street tree canopy and adopt programs to plant climate-adapted trees within the public right-of-way, especially in equity priority communities and areas with a high heat index.



**Action CD 3.10 Tree Planting Funding.** Identify funding sources for tree planting programs for private, residential property on an annual basis.



**Action CD 3.11 Tree Support for Low-Income Homeowners.** Explore funding sources and other forms of City support for low-income homeowners to plant and/or replace trees on their property.



## ARCHAEOLOGICAL AND PALEONTOLOGICAL RESOURCES AND TRIBAL CULTURAL RESOURCES

Archaeological and cultural artifacts are treasures that help to preserve the city's complex history for future generations. The Costanoan people, commonly referred to as Ohlone people, are estimated to have been some of the earliest inhabitants in the area between 5,000 and 7,000 years ago. It is estimated that in 1770, the Ohlone of the Bay Area numbered around 10,000. Forty years later, by about 1810, much of the native population and much of the traditional culture of these people had been destroyed in the face of relentless European encroachment and its devastating impacts – disease, warfare, displacement, and the California mission system. The City acknowledges its history as indigenous land as well as the rich living tribal culture in the Bay Area and strives to protect resources that are culturally significant to present-day Native American tribes through consultation and collaborative relationship-building. Grading and construction in the modern era have eliminated most aboveground record of the region's indigenous inhabitants, but records of these communities may remain undisturbed underground.

Paleontological resources (fossils) are the remains and/or traces of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains, such as bones, teeth, shells, and wood are often found in the geologic deposits (rock formations) in which they were originally buried. Due to the scientific and educational value of paleontological resources, they are protected under federal and State law. This section provides policy direction for protecting archaeological, paleontological, and cultural resources. Policy direction for the protection of historic resources can be found under Goal CD-5 of this element.

## GOALS, POLICIES, AND ACTIONS

**GOAL CD-4** Protect archaeological and paleontological resources and resources that are culturally significant to Native American tribes and acknowledge San Mateo's past as indigenous land. Encourage development projects to recognize historical tribal lands.

### POLICIES

**Policy CD 4.1 Archaeological Resource Protection.** Preserve, to the maximum extent feasible, archaeological sites with significant cultural, historical, or sociological merit for present-day residents or Native American tribes.

**Policy CD 4.2 Tribal Cultural Resources.** Preserve areas that have identifiable and important tribal cultural resources and comply with appropriate State and federal standards to evaluate and mitigate impacts to cultural resources, including tribal, historic, archaeological, and paleontological resources.



**Policy CD 4.3 Tribal Consultation.** Consult with Native American representatives, including through early coordination, to identify locations of importance to Native Americans, including archaeological sites, sacred sites, traditional cultural properties, and other types of tribal cultural resources. Respect tribal concerns if a tribe has a religious prohibition against revealing information about specific practices or locations.



**Policy CD 4.4 Potential Archaeological Impacts.** Consistent with the California Environmental Quality Act (CEQA), prior to construction, consult the California Archaeological Inventory Northwest Information Center for project-specific reviews to evaluate the potential for impact on archaeological resources and determine whether or not further study is warranted.

**Policy CD 4.5 On-Site Mitigation.** If development could affect a tribal cultural resource or archaeological resource, require the developer to contact an appropriate tribal representative to train construction workers on appropriate avoidance and minimization measures, requirements for confidentiality and culturally appropriate treatment, other applicable regulations, and consequences of violating State laws and regulations.

**Policy CD 4.6 Paleontological Resource Protection.** Prohibit the damage or destruction of paleontological resources, including prehistorically significant fossils, ruins, monuments, or objects of antiquity, that could potentially be caused by future development.

## ACTIONS

**Action CD 4.7 Preconstruction Investigations.** Consistent with CEQA, establish specific procedures for preconstruction investigation of high- and medium-sensitivity sites identified in the 1983 Chavez investigation, unless superseded by more recent investigations, to assist property owners, developers, and the City in making decisions when archaeological resources may be affected.

**Action CD 4.8 Archaeological Sensitivity Data.** Update and maintain the City's data on areas with high archaeological sensitivity.

**Action CD 4.9 Paleontological Resource Mitigation Protocol.** Prepare a list of protocols in accordance with Society of Vertebrate Paleontology standards that protect or mitigate impacts to paleontological resources, including requiring grading and construction projects to cease activity when a paleontological resource is discovered so it can be safely removed.



## HISTORIC RESOURCES

Spanish exploration of San Mateo began in the 1770s, but European settlement of this area started around 1793 when the San Mateo area became an asistencia, or outpost, for Mission Dolores. After Mexican independence from Spain in 1822, the missions were divided into large land grants. Rancho San Mateo and Rancho de las Pulgas encompassed what became San Mateo.

By the end of the Mexican-American War in 1848, California had become a territory of the United States and obtained statehood two years later. The small village of San Mateo began to develop at the juncture of several stagecoach lines, established in the late 1840s and 1850s, and the San Francisco and San Jose Railroad, which began servicing the community in 1864. San Mateo became a popular destination for tourists visiting Crystal Springs Canyon and for wealthy San Franciscan families, who constructed lavish mansions. The commercial downtown developed around the intersection of the railroad station and B Street, and schools, utilities, and other public services were established to support the growing population. In 1894, an overwhelming majority of residents voted to incorporate the town of San Mateo.

From the late nineteenth century through the 1930s, numerous residential neighborhoods were established throughout San Mateo, particularly as former estates were sold and subdivided. These include subdivisions in the Central neighborhood in the late nineteenth century, and the San Mateo Park, San Mateo Heights, and Hayward's Addition subdivisions in the early 1900s. Residential development intensified following the 1906 earthquake and fires, with new development concentrated in the Hayward Park, East San Mateo, and North Central neighborhoods. Other notable developments included the Glazenwood neighborhood in the 1920s and the Baywood and Aragon neighborhoods in the 1930s.

As San Mateo's population evolved, it expanded from a town to an established community in the early twentieth century. Large numbers of Irish immigrants arrived in the 1860s and were followed by the first Chinese and Japanese immigrants the following decade. Chinese residents initially formed a small Chinatown at B Street and Second Avenue and later at Claremont Street and First Avenue around 1900.



Chinese residents continued to live in small clusters in the downtown area well into the 1940s. Japanese immigrants who arrived in San Mateo found employment as domestic workers and at the local salt plant; they also opened small businesses in the burgeoning downtown and became successful gardeners as part of the Peninsula's flower industry. By the turn of the twentieth century, they made up the largest Japanese community in the county. Following World War II, development increased significantly in San Mateo. Significant postwar development included the construction of the Hillsdale shopping center and large-scale residential tract developments west of El Camino Real.

This history is represented in the almost 200 historic resources and two historic districts as identified in the 1989 Historic Building Survey. Approximately 37 of these structures are individually eligible for the National Register of Historic Places. They range from historic buildings in the downtown to single-family homes from the late nineteenth century. In addition, there are six historic resources listed on the National Register of Historic Places and six historic resources on the State Register of Historic Places, as shown in Table CD-1.

State and federal laws and programs help to protect historic and archaeological resources, including the California Historical Building Code, which preserves California's architectural heritage by ensuring historic buildings are maintained and rehabilitated in accordance with historically sensitive construction techniques. In addition, the Mills Act, enacted in 1976, provides a property tax incentive to owners of qualified, owner-occupied, historical properties to maintain and preserve the historic property in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

This section provides policy direction for the preservation of historic resources. Goals and policies focused on protecting archaeological and resources that are culturally significant to Native American tribes can be found under Goal CD-4 of this element.

**Table CD-1 National Register and State Register of Historic Places in San Mateo**

Historic Resource Name	Location	National Register	State Register	Year of Construction
Ernest Coxhead House	37 East Santa Inez Avenue	X	X	1891
Vollers House	353 North Claremont Street	X		1891
Hotel St. Matthew	215-229 Second Avenue	X	X	Early 1900
Eugene De Sabla J. Jr. Teahouse and Tea Garden	70 De Sabla Road	X	X	1907
National Bank of San Mateo	164 South B Street	X	X	1924
US Post Main Office – San Mateo	210 South Ellsworth Street	X	X	1935
Baywood Elementary School	600 Alameda de las Pulgas		X	1939

## GOALS, POLICIES, AND ACTIONS

**GOAL CD-5** Preserve historic and culturally important resources to maintain San Mateo's special identity and continuity with the past.

### POLICIES

**Policy CD 5.1 Historic Preservation.** Identify and preserve historic resources, including individual properties, districts, and sites to maintain San Mateo's sense of place and special identity, and to enrich our understanding of the city's history and continuity with the past.

**Policy CD 5.2 Historic Resources Preservation.** Actively identify and preserve concentrations of historic resources, which convey the flavor of local historical periods, are culturally significant, or provide an atmosphere of exceptional architectural interest or integrity, when they meet national, State, or local criteria.

**Policy CD 5.3 Historic Resources Definition.** Define historic resources as buildings, structures, sites, and districts that are listed in or determined to be eligible for listing in the National Register of Historic Places and/or California Register of Historical Resources, designated resources in the 1989 Historic Building Survey Report, and resources found to be eligible through documentation in a historic resources report.



**Policy CD 5.4 Public Awareness.** Foster public awareness and appreciation of the City's historic resources and educate the community about how to preserve and improve these resources. Increase public appreciation by supporting groups and organizations that provide neighborhood workshops, public presentations, interpretive signage, and walking tours.

**Policy CD 5.5 Historic Resources Renovation and Rehabilitation.** Promote the renovation and rehabilitation of historic resources that conforms to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Structures and the California Historical Building Code and prioritize historic structures for available rehabilitation funds.

**Policy CD 5.6 Historic Preservation Funding.** Pursue and promote historic preservation funding sources to incentivize the protection of historic resources, such as the California Mills Act Property Tax Abatement Program, Federal and State Historic Preservation Tax Incentives Program, and State Historic Rehabilitation Tax Credit Program.

**Policy CD 5.7 Demolition Alternatives.** Require an applicant to submit alternatives to preserve a historic resource as part of any planning application that proposes full demolition. Implement preservation methods unless health and safety requirements cannot be met or the City Council makes a finding explaining the specific reasons why the social, economic, legal, technical, or other beneficial aspects of the proposed demolition outweigh the unavoidable adverse impacts to the historic resource. If a designated historic resource cannot be preserved, require City approval before the demolition of a historic resource.



## ACTIONS

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- Action CD 5.8 Historic Resources Context Statements.** Prepare a citywide historic context statement to guide future historic resource survey efforts to identify individually eligible resources and historic districts. If a neighborhood is identified as a historic district, prepare a more detailed historic context statement for that individual neighborhood.
- Action CD 5.9 Historic Resources Survey.** Establish and maintain an inventory of architecturally, culturally, and historically significant buildings, structures, sites, and districts. Proactively maintain an up-to-date historic resources inventory by seeking funding opportunities to update the historic survey. Prepare neighborhood-specific historic context statements prior to updating the historic resources survey.
- Action CD 5.10 Historic Preservation Ordinance.** Update the City's Historic Preservation Ordinance to create a framework for the designation of historic resources and districts, establish review and permitting procedures for historic alterations, demolitions or relocations, be consistent with federal and State standards and guidelines, and align with the other goals and policies outlined in this Element.
- Action CD 5.11 Preservation Incentives.** Explore the option to create incentives to preserve historic and cultural resources, such as reducing parking and other prescriptive requirements, allowing adaptive reuse, or establishing a transfer of development rights program.
- Action CD 5.12 Historic Resources Design Standards.** Create objective design standards for alterations to historic resources and new development adjacent to historic resources within historic districts. Use the Secretary of the Interior's Standards as the basis for these objective design standards to ensure projects have a contextual relationship with land uses and patterns; spatial organization; visual relationships; cultural and historic values; and the height, massing, design, and materials of historic resources.
- Action CD 5.13 Certified Local Government.** Explore the feasibility of becoming a Certified Local Government (CLG) to become eligible for federal grant funds and technical assistance in support of historic resource preservation efforts.

## CITY PLACEMAKING

San Mateo's image and unique identity is composed of distinct residential neighborhoods, major open spaces, key views and gateways, major corridors, distinct shopping areas, train stations, landscaping, and the spatial arrangement of buildings and architectural styles. Public art can be found throughout the city, from murals and mosaics to interactive sculpture to temporary installations. The city's vibrant downtown, popular Hillsdale Shopping Center, and active dining scene also contribute to the city's image, create a sense of place for residents, and attract visitors from outside of the city.

### Sustainable Design

Since many goals and policies throughout the Strive San Mateo General Plan 2040 promote San Mateo as a sustainable city, it is important to recognize that site layout and the design of buildings are major factors in meeting the objectives of sustainable design. Sustainability starts in the early design stages of a development, and the Land Use Element includes a number of policies and actions to ensure that features like walkability, transit access, and open space are integrated into new development. High-efficiency heating and cooling equipment and appliances can reduce water use, maximize energy efficiency, and improve indoor air quality, and are called for in the Public Services and Facilities Element. Drought-tolerant landscaping and the use of pervious paving materials can also reduce water waste and runoff into the bay, as noted in the Conservation, Open Space, and Recreation Element. This Community Design and Historic Resources Element focuses on locating and orienting structures on a site to take full advantage of solar access and shading, and to preserve natural resources, such as mature vegetation.

### Gateways

Gateways are the key locations where people enter and leave the city, distinct districts, and neighborhoods. They act as a point of distinction between different areas and contribute to a sense of arrival to one place from another. Gateways into and within San Mateo include El Camino Real as it crosses the north and south borders of the city, entrances from US Highway 101 and State Route (SR-) 92, or Third Avenue at the edge of downtown. As gateways convey a sense of arrival and provide initial and lasting impressions, they should be attractive and identifiable. Gateways can express a pleasant welcome through architectural features, landscaping, and art. Signage can also help define city gateways uniformly.

### Corridors

Corridors are the way residents and visitors most commonly see the city as they move through it. A well-designed corridor should connect to important destinations, provide a sense of orientation, be attractive, and project a positive image of the city. It should provide appropriate street width for neighborhood character, adequate lighting, accommodation for pedestrians and bicycles, and public spaces for gathering. Heights, setbacks of buildings, and the color and texture of paving materials should also be considered in corridor design.

Major corridors in the city include El Camino Real, US Highway 101, and the railroad. In addition to this element, the City's El Camino Real Master Plan also provides direction for enhancements to El Camino Real from SR-92 to the Belmont border, which will further its role as an important community corridor that supports a vibrant mixed-use community.



## Public Art

Public art helps create an inviting atmosphere for gathering, fosters economic development, and contributes to vital public spaces. San Mateo’s Art In Public Places program recognizes that cultural and artistic resources enhance the quality of life for individuals living, working, and visiting the city. The program requires new commercial and multifamily residential projects valued over a certain amount to provide publicly visible art or pay an in-lieu art fee. Since its adoption, the program has resulted in new art installations throughout the city.

This section provides policy direction for developing and maintaining the city’s vibrant image. See the Land Use Element for guidance on different types and locations of future development; the Circulation Element for discussion of roadways, bike paths, sidewalks, and other transportation infrastructure; the Public Facilities and Services Element regarding utility undergrounding; and the Open Space, Conservation, and Recreation Element on the importance of parks and open space as integral parts of the community.

## GOALS, POLICIES, AND ACTIONS

**GOAL CD-6** Develop and maintain an attractive urban fabric that reflects San Mateo’s unique visual and architectural character.

## POLICIES

**Policy CD 6.1 Community Cohesion.** Design new private development, streets, and public spaces to enhance social connection by providing human-scale street-fronting uses and community spaces, as appropriate.



**Policy CD 6.2 Gateways.** Develop gateways that visually announce key entrances to San Mateo by maintaining or establishing distinctive architectural, art, or landscape features.



**Policy CD 6.3 Sustainable Design.** Encourage integration of sustainable design features and elements into the design of new buildings, including locating and orienting buildings to access solar exposure, preserving mature vegetation to the extent feasible, and using green building materials.

**Policy CD 6.4 El Camino Real (SR-82) Corridor.** Strive to make El Camino Real a destination, not just a corridor for people to pass through, by encouraging improvements to the public right-of-way and private properties along El Camino Real that will make the corridor safer and more attractive for all users. Examples of such improvements include redesigned transit stops, an improved pedestrian realm, and updated/improved building façades. Incorporate the Guiding Principles of the Grand Boulevard Initiative into future plans for the El Camino Real corridor in San Mateo.

**Policy CD 6.5 US Highway 101 Frontage.** Encourage upgrading of the appearance of US Highway 101 and properties adjacent to the freeway through design treatment, screening, and right-of-way landscaping.

**Policy CD 6.6 Signage.** Maintain signage controls that appropriately regulate the design, size, type, illumination, and quantity of signs visible from corridors and create consistent signage that reinforces San Mateo's unique identity.

**Policy CD 6.7 Public Open Space Design.** Seek opportunities to establish public open spaces in new developments and new public buildings, and promote innovative and creative designs to create exceptional, unique, and functional spaces. Require signage that clearly delineates these spaces as publicly accessible.

**Policy CD 6.8 Public Art.** Continue to require public art as part of new development and ensure the art is visible and accessible to the public. Support public art as a resource that enhances the quality of life for individuals living in, working in, and visiting the city, improves the quality of the urban environment, and increases property values.



**Policy CD 6.9 Inclusive Outreach.** Involve the community in the City's efforts to develop and maintain an attractive urban fabric that reflects San Mateo's unique visual and architectural character. Use outreach and engagement methods that include broad representation and are culturally sensitive, particularly for equity priority communities. Communicate clearly how and at what stages members of the public can provide input for development projects under review.

**Policy CD 6.10 Nighttime Lighting.** Require nighttime lighting to be energy efficient, be designed to minimize light pollution and light spillage to adjacent properties, while protecting public safety.

## ACTION

**Action CD 6.11 Brand Identity Package.** Develop a brand identity package for the City.

## ELEMENTS OF DESIGN

Site design and the architectural style of buildings contribute to the look and feel of a city. The orientation of buildings, the massing and scale of the building, and other design elements can improve the visual aesthetic of an area. Buildings can be oriented to take advantage of surroundings such as fronting sidewalks in commercial districts, capturing scenic views, and/or minimizing environmental impacts such as flooding, wind, shadows, etc. Massing refers to the height, width, and shape of a building. Scale is the relative size of the building overall as well as the elements that make up the façade. Building materials, lighting, landscaping, and outdoor spaces also contribute to the overall appearance and experience of a site. The design choices for buildings vary depending on the area. For example, the design elements for an active mixed-use downtown, auto-oriented shopping center, office park, or residential neighborhood will be different.

Outside of this General Plan, other City regulations and plans also influence the design and architecture of new development. The Zoning Code adds more detail on allowed uses of land and buildings, the density of development and population, the height and bulk of structures, parking provisions, open space requirements, landscaping standards, and other design requirements. The Multifamily and Mixed-Use Objective Design Standards (ODS) provide clear and specific requirements for everything larger than a single-family home. Specific Plans guide infill development in several areas, including Bay Meadows and near the Hayward Park and Hillsdale Caltrain stations, and tend to allow greater flexibility in design than in areas not covered by Specific Plans. Throughout the city, projects that require a higher level of review must submit a Planning Application to ensure consistency with the General Plan and any applicable community or specific plans.

Streetscaping and other public landscaping also shapes the look and feel of San Mateo. The City's Department of Public Works has detailed engineering standards that work in combination with the Municipal Code and adopted plans to establish objective design standards within the public right-of-way.

### Residential Neighborhoods

Each neighborhood in San Mateo is a reminder of the unique blend of architectural styles, building materials, scale, and street patterns that were typical at the time of its development. The shape of a house, its placement on the lot, its arrangement of doors and windows, its roof style, and its architectural style all make up the character of a building and contribute to the collective appearance of the neighborhood. In every community, residential neighborhoods grow and evolve while balancing the continuity and consistency of existing physical characteristics through the appropriate design of new development.



This section provides policy direction for the design of residential neighborhoods, and mixed-use and commercial areas. The Land Use Element includes additional goals and policies for shopping areas in transition and three focused planning areas in the city: Downtown, El Camino Real Corridor, and the Hillsdale Station Area. For additional policy direction on sustainability, see the Climate Change and Land Use section of the Land Use Element.

## GOALS, POLICIES, AND ACTIONS

**GOAL CD-7** Balance the growth and evolution of residential neighborhoods with the need to maintain and enhance their existing characteristics and physical qualities through the appropriate design of new development.

### POLICIES

- Policy CD 7.1 Low-Density Residential Development.** Require new homes in the Low- and Very Low-Density residential designations, including single-family dwellings, duplexes, triplexes, four-plexes, and accessory dwelling units (ADUs) to be consistent with objective design standards as outlined in the City’s Residential Design Standards.
- Policy CD 7.2 Single-Family Design.** Encourage single-family additions and new dwellings that address the preservation and enhancement of neighborhood visual and architectural character through context-sensitive building scale, materials, architectural style and details, and privacy.
- Policy CD 7.3 Multifamily Design.** Encourage architectural design of new multifamily developments that enhances a neighborhood’s visual and architectural character by providing context-sensitive building and pedestrian-scale elements, high-quality materials and construction, open space, and resident amenities.
- Policy CD 7.4 Multifamily Parking.** Require new multifamily developments to design and site parking to avoid blank, ground-floor walls and to screen views of parking from the street.
- Policy CD 7.5 Multifamily Open Space.** Require that a portion of required open space for new multifamily projects be useable for passive or active recreation.

### ACTION

- Action CD 7.6 Objective Design Standards.** Develop and adopt objective design standards that clearly outline the City’s design expectations for new single-family and multifamily projects.



## Mixed-Use and Commercial Areas

This element aims to improve the visual and architectural character, livability, and vitality of mixed-use and commercial areas in San Mateo. It supports human-scale design that cultivates pedestrian activity in commercial and mixed-use areas by providing adequate sidewalk widths; activating ground-floor street façades with windows, plantings, and awnings; using high-quality construction materials; and including human-scale details and architectural features. New mixed-use and commercial development that respect the scale and rhythm of surrounding buildings, including by providing breaks in the building face at spacings common to buildings in the area and by stepping back upper floors, feels more appealing and welcoming to visitors. Sidewalk and pedestrian mall outdoor dining and parklets, the outdoor display of goods for retail uses, and public seating areas can add visual interest and activity to commercial and mixed-use areas.



## GOALS, POLICIES, AND ACTIONS

**GOAL CD-8** Improve the visual and architectural character, livability, and vitality of mixed-use and commercial areas.

### POLICIES

- Policy CD 8.1 Objective Design Standards.** Provide clear, objective, and quantifiable design standards to guide new mixed-use and commercial development.
- Policy CD 8.2 Human-Scale Design.** Cultivate pedestrian activity in commercial and mixed-use areas by providing adequate sidewalk widths, activating ground-floor street façades with active uses, windows, plantings, and awnings, using high-quality construction materials, and including human-scale details and architectural features.
- Policy CD 8.3 Respect Existing Scale and Rhythm.** Encourage new mixed-use and commercial development to respect the scale and rhythm of surrounding buildings, including by providing breaks in the building face at spacings common to buildings in the area and by stepping back upper floors.
- Policy CD 8.4 Commercial Parking.** Encourage commercial projects to provide required parking underground to minimize the amount of ground-floor area dedicated to parking. When parking is at grade, it should be located towards the rear of a parcel, away from active street frontages and public spaces.
- Policy CD 8.5 Outdoor Display and Eating.** Support sidewalk and pedestrian mall outdoor dining and parklets, the outdoor display of goods for retail uses, and public seating areas to add visual interest and activity to commercial and mixed-use areas.

### ACTIONS

- Action CD 8.6 Objective Design Standards.** Develop and adopt objective design standards for new mixed-use and commercial development to provide a clear understanding of the City's expectation for new project design, including pedestrian-friendly design.
- Action CD 8.7 Commercial Development Adjacent to Residential.** Develop and adopt objective design standards that define and require appropriate design transitions from commercial to residential zones.





# CHAPTER 6

## Conservation, Open Space, and Recreation Element









# CONSERVATION, OPEN SPACE, AND RECREATION ELEMENT

## INTRODUCTION

The Conservation, Open Space, and Recreation Element provides the policy framework for the development, management, and preservation of San Mateo's natural and recreational resources.

San Mateo is home to a variety of natural resources, open spaces, and parks and recreational facilities that are cherished by the San Mateo community. The city's air quality and open spaces, creeks, and wetlands provide habitats for plants and animals, natural infrastructure that supports resilience, and access to nature that offers social, physical, and mental health benefits. The City's system of parks and recreation programs and facilities promotes a healthy and active lifestyle and lifelong learning.

The Conservation, Open Space, and Recreation Element combines the State-mandated elements for Open Space and Conservation given the interrelatedness of the two. It contains the following topics:

- Natural Resources
- Access to Nature and Preservation of Open Space
- Creeks and Riparian Areas
- Air Quality
- Parks and Recreation



## RELEVANCE TO GENERAL PLAN THEMES



### Sustainability in this Element:

- Protects the City's natural resources from development, including wetlands, riparian habitats, and other sensitive natural communities.
- Manages public access to the City's natural resources to balance connections to nature and disturbance to habitats.
- Affirms that all San Mateo residents should be able to breathe safe, clean air.
- Guides park and recreation management using environmentally, socially, and economically sustainable practices.



### Environmental Justice in this Element:

- Prioritizes preservation, restoration, rewilding, and enhancement of natural landscapes in or near equity priority communities.
- Establishes mitigation requirements for construction activities or new developments that could be a source of toxic air contaminants (TACs).
- Prioritizes rehabilitation of parks and recreation facilities in equity priority communities.



### Community Engagement in this Element:

- Fosters appreciation and awareness for natural conservation opportunities through enhanced programs and public outreach.
- Cultivates opportunities for community engagement through the City's park and recreation programs.
- Provides experiences for all community members, including children, youth, and aging adults to promote personal enrichment and lifelong learning.







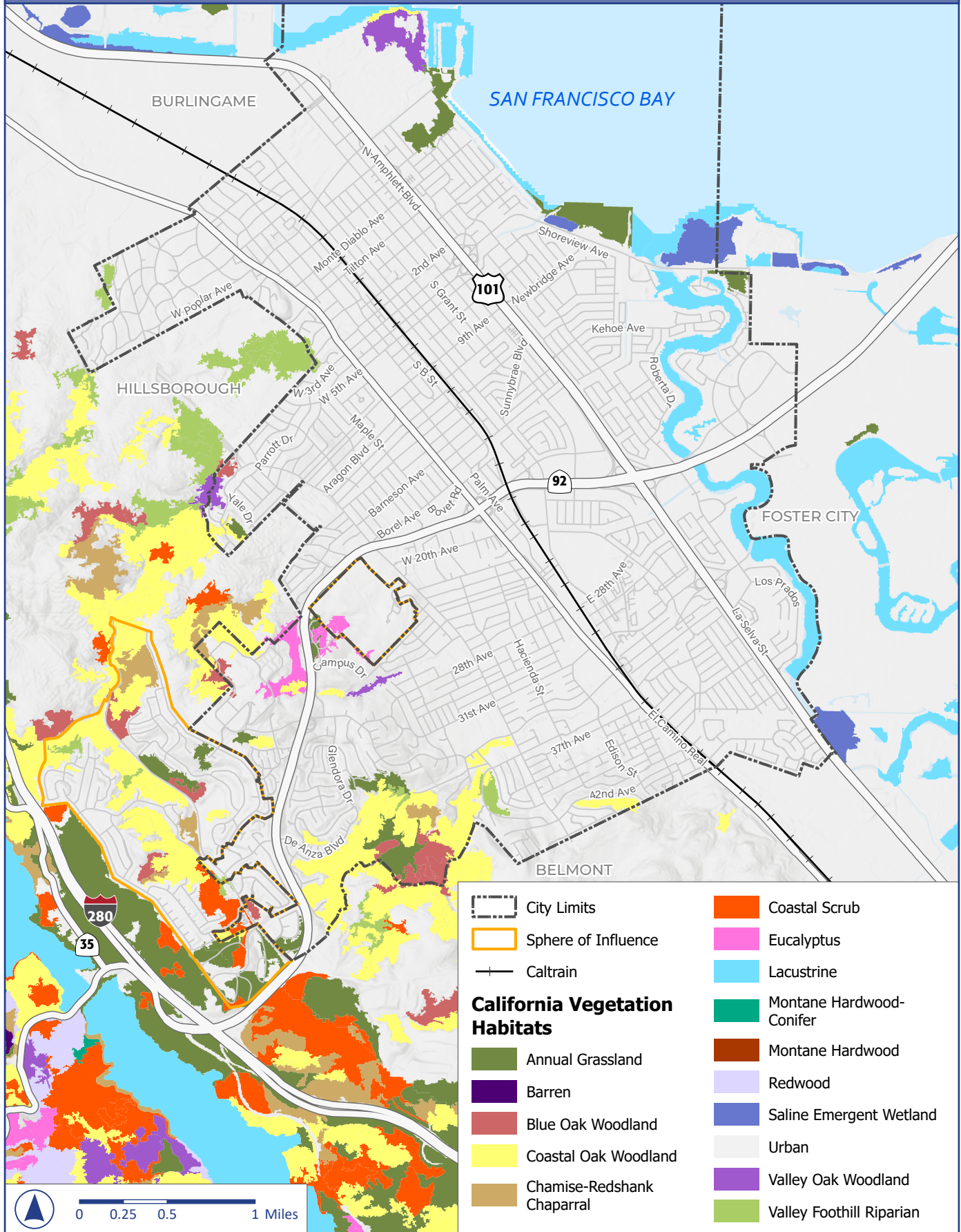
## NATURAL RESOURCES

Natural resources are abundant in and around San Mateo. These diverse open spaces comprise an integrated natural network supporting the city's livability and resiliency and are important recreational and scenic resources highly valued by the community. The City's natural environment is part of the broader San Francisco Bay Area ecosystem. The San Francisco Bay and Delta form the largest estuary on the Pacific Coast, encompassing approximately 1,600 square miles of waterways and is the outlet for over 40 percent of California's fresh water. The marshes and mudflats of the San Francisco Bay provide important feeding and roosting habitat for migrating waterfowl along the Pacific Flyway.

Natural features that define San Mateo's local setting include the city's three-mile length of shoreline and marshes along the San Francisco Bay, Coyote Point County Park, the Marina Lagoon, San Mateo Creek, and a number of smaller creeks, Sugarloaf Mountain, and hillsides to the west. These natural areas host biological communities that are home to many plant and animal habitats and serve as wildlife corridors. Riparian and wetland habitats in and around San Mateo are recognized and protected sensitive habitats under the jurisdiction of the California Department of Fish and Wildlife (CDFW) and the US Army Corps of Engineers (USACE). Figure COS-1 shows the sensitive vegetation habitats within San Mateo.

This section provides policy direction for protecting and enhancing the City's natural resources. Goals and policies focused on preserving and enhancing San Mateo's natural setting, minimizing the impact of hillside development, and protecting and improving the city's urban tree canopy can be found in the Community Design and Historic Resources Element.

Figure COS-1 Vegetation Habitats



Source: USDA, 2013; ESRI, 2022; PlaceWorks, 2023.

Note: This map is included for informational purposes and is not adopted as part of this General Plan.

## GOALS, POLICIES, AND ACTIONS

**GOAL COS-1** Protect and enhance the City’s natural resource areas that provide plant and animal habitat and benefit human and ecological health and resilience.

### POLICIES



**Policy COS 1.1 Sensitive Natural Communities.** Protect riparian habitat and other sensitive natural communities. When an opportunity arises, restore natural resources, including wetlands.



**Policy COS 1.2 Interjurisdictional Coordination.** Coordinate with adjacent jurisdictions and regional, State, and federal agencies to protect critical wildlife habitat, including by participating in comprehensive habitat management programs.



**Policy COS 1.3 Site Evaluations.** Require independent professional evaluation of sites for any public or private development within known or potential habitat of species designated by State and federal agencies as rare, threatened, or endangered.

The site evaluation shall determine the presence/absence of these special-status plant and animal species on the site. The surveys associated with the evaluation shall be conducted for proper identification of the species. The evaluation shall consider the potential for significant impacts on special-status plant and animal species and shall include feasible mitigation measures to mitigate such impacts to the satisfaction of the City and appropriate governmental agencies (e.g., US Fish and Wildlife Service and California Department of Fish and Wildlife). The City shall require adequate mitigation measures for ensuring the protection of sensitive resources and achieving “no net loss” of sensitive habitat acreage, values, and functions.

In lieu of the site evaluation, presence of special-status plant and animal species may be assumed, and the City may require “no net loss” mitigation of sensitive habitat acreage be applied to the satisfaction of the City and appropriate governmental agencies.

**Policy COS 1.4 Avoidance of Nesting Birds.** Native bird nests in active use should be avoided in compliance with State and federal regulations. For new development sites where nesting birds may be present, vegetation clearing and construction should be initiated outside the bird nesting season (March 1 through August 31) or preconstruction surveys should be conducted by a qualified biologist in advance of any disturbance. If active nests are encountered, appropriate buffer zones should be established based on recommendations by the qualified biologist and remain in place until any young birds have successfully left the nest.

**Policy COS 1.5 Surveys for Sensitive Natural Communities.** Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of sensitive natural communities prior to development approval. Such surveys should be conducted by a qualified biologist and occur prior to development-related vegetation removal or other habitat modifications.



**Policy COS 1.6 Surveys for Regulated Waters.** Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of regulated waters prior to development approval. Such surveys should be conducted by a qualified wetland specialist and occur prior to development-related vegetation removal or other habitat modifications.

**Policy COS 1.7 Surveys for Wildlife Movement Corridors.** Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of important wildlife corridors prior to development approval. Such surveys should be conducted by a qualified biologist and occur prior to development-related vegetation removal or other habitat modifications.



**Policy COS 1.8 Development Near Wetlands or Water.** Avoid wetlands development where feasible (as defined under California Environmental Quality Act [CEQA] Guidelines, Section 15364). Restrict or modify proposed development in areas that contain wetlands or waters to ensure the continued health and survival of special-status species and sensitive habitat areas. Development projects shall be designed to avoid impacts on sensitive resources, or to adequately mitigate impacts by providing on-site or off-site replacement at a higher ratio. Project design modification should include adequate avoidance measures, such as the use of setbacks, buffers, and water quality, drainage-control features, or other measures to ensure that no net loss of wetland acreage, function, water quality protection, and habitat value occurs. This may include the use of setbacks, buffers, and water quality, drainage-control features, or other measures to maintain existing habitat and hydrologic functions of retained wetlands and waters of the US.



**Policy COS 1.9 Wetland Development Mitigation.** If an applicant has demonstrated that wetlands avoidance is not feasible, provide replacement habitat on-site through restoration and/or habitat creation to ensure no net loss of wetland acreage, function, water quality protection, and habitat value. Allow restoration of wetlands off-site only when an applicant has demonstrated that on-site restoration is not feasible. Off-site wetland mitigation should consist of the same habitat type as the wetland area that would be lost.

**Policy COS 1.10 Wetland Access Design.** Design public access to avoid or minimize disturbance to sensitive resources, including necessary setback/buffer areas, while facilitating public use, enjoyment, and appreciation of wetlands.

**Policy COS 1.11 Marina Lagoon Island.** Maintain Marina Lagoon Island as a bird nesting and breeding site.

**Policy COS 1.12 Reduced Risk of Bird Collision.** Require that taller structures be designed to minimize the potential risk of bird collisions using input from the latest bird-safe design guidelines and best management practice strategies to reduce bird strikes.

## ACTION

**Action COS 1.13 Environmental Review.** Review the environmental documents for projects adjacent to City boundaries regarding impacts and mitigation to species and habitat.

## ACCESS TO NATURE AND PRESERVATION OF OPEN SPACE

Spending time in nature is known to have positive social, physical, and mental health benefits. Ensuring that the City's natural resources, including open space areas, are accessible is critical for maintaining the quality of life in San Mateo for city residents and visitors. Preserving open space is also essential for maintaining the uniqueness of San Mateo and the ecological health of its environment.

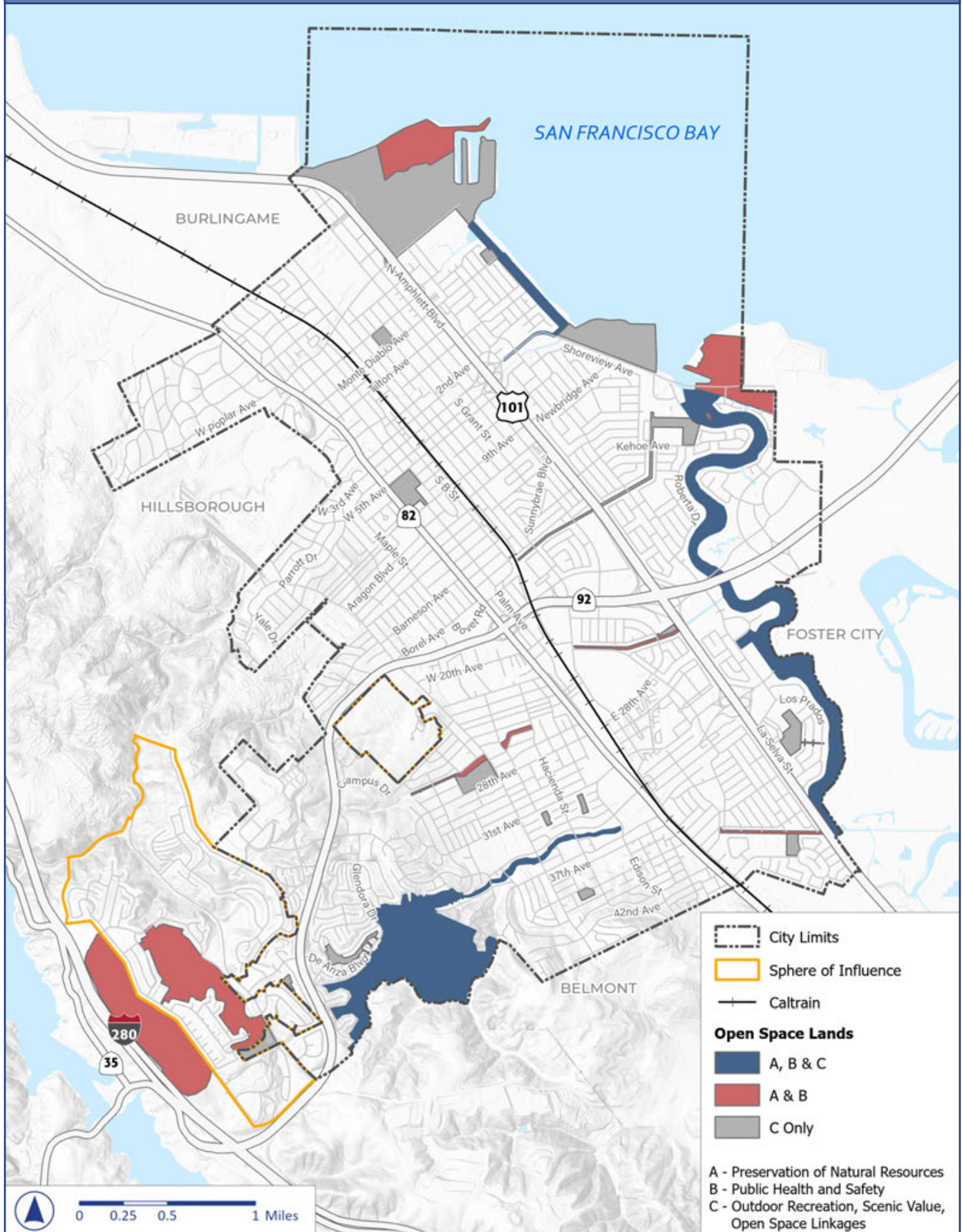
Figure COS-2 illustrates the type and nature of open space land in the City of San Mateo as defined by State law. "Open space land" is any parcel or area of land or water that is essentially unimproved and devoted to an open-space use, as defined in this section, and that is designated on a local, regional, or State open-space plan as any of the following:



- **Open Space for Natural Resources.** This includes areas required for plant and animal habitat or for ecological and scientific study. In San Mateo, these open spaces include areas such as the Bay Marshes, creeks, private open spaces, and Sugarloaf Mountain.
- **Open Space for Outdoor Recreation.** This includes parks and areas of scenic and cultural value, stream banks, trails, and other links between open spaces. In San Mateo, these open spaces include Marina Lagoon, Seal Point, Sugarloaf Mountain, designated private land reserves, and a variety of park sites.
- **Open Space for Public Health and Safety.** This includes areas that require special management because of hazardous conditions, such as unstable soils, fire risk, fault zones, or flood. In San Mateo, these open spaces include portions of the shoreline, Sugarloaf Mountain, and San Mateo Creek.
- **Open Space for Tribal Resources.** This includes protected tribal resources as described in Sections 5097.9 and 5097.993 of the Public Resources Code, which includes Native American historic, cultural, or sacred sites. San Mateo does not have any protected open space tribal resource areas, but it is possible that tribal resources may exist in open spaces.
- **Open Space for Managed Production of Resources.** This includes forest and agricultural lands, water bodies important to the management of commercial fisheries, and mineral deposits. San Mateo does not have any such areas.
- **Open Space for Military Support.** This includes areas in support of military installations, such as areas adjacent to military installations, military training routes, and underlying restricted airspace. San Mateo does not include any open space areas for military support.

This section provides policy direction for access to nature and the preservation of open space. Goals and policies focused on access to parks, recreation, and facilities can be found under Goals COS-5 and COS-6 of this element.

Figure COS-2 Open Space Lands



Source: ESRI, 2022; City of San Mateo Parks and Recreation, 2023; PlaceWorks, 2023.

Note: This map is included for informational purposes and is not adopted as part of this General Plan.



## GOALS, POLICIES, AND ACTIONS

**GOAL COS-2** Ensure that current and future generations will enjoy the environmental, social, health, and economic benefits derived from access to our urban forest, parks, and open spaces.

### POLICIES



**Policy COS 2.1 Preservation of Open Space.** Preserve, protect, and enhance open space areas in San Mateo that provide health benefits and access to nature for all residents.



**Policy COS 2.2 Sustainable Access.** Continue to design and manage public access to the City's natural resources, including open space areas, in a way that promotes public health and connection to nature while avoiding or minimizing disturbance and sustaining these resources into the future.



**Policy COS 2.3 Equitable Conservation.** Prioritize preservation, restoration, rewilding, and enhancement of natural landscapes in or near underserved communities for their role in improving air quality and community health.



**Policy COS 2.4 Shoreline Interpretive Opportunities.** Promote public awareness of the value and care of the shoreline for habitat values, water quality, and safety through on-site interpretive programs or outdoor displays that are in character with the adjacent open spaces.

**Policy COS 2.5 Marina Lagoon and Shoreline Public Access.** New development having frontage on Marina Lagoon shall provide and retain public access to provide a connection to the Marina Lagoon.



**Policy COS 2.6 Sugarloaf Mountain Management.** Improve, maintain, and manage the natural qualities and habitat of Sugarloaf Mountain and Laurelwood Park, including management of public access, study, recreation, and wildland fire hazards.



**Policy COS 2.7 Sugarloaf Mountain Interpretive Opportunities.** Promote public awareness of the value and care of Sugarloaf Mountain through on-site interpretive programs or displays that are in character with the open space, consistent with the adopted management plan.

### ACTIONS

**Action COS 2.8 Improvements to Bayfront Nature Area.** Review plans for the remaining uncompleted portions of Shoreline Park, including the Bayfront Nature Area, Bay Marshes, and J. Hart Clinton Drive to ensure they reflect current environmental and programmatic needs.

**Action COS 2.9 Volunteer Program.** Focus volunteer resources on restoring native habitat around the city, especially in the creeks, where feasible.



## CREEKS AND RIPARIAN AREAS

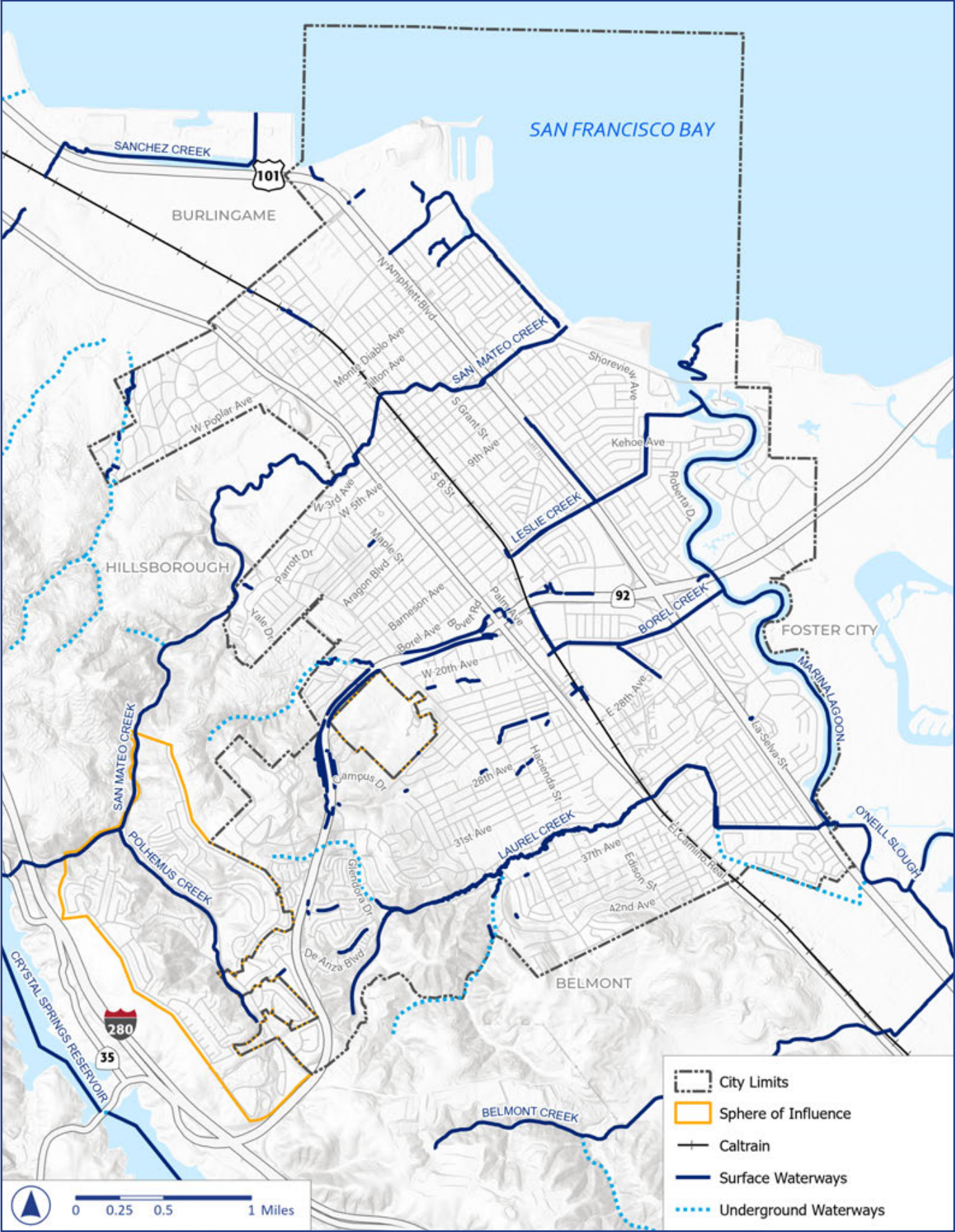
San Mateo has many waterways and riparian areas that offer immense biological benefits. They provide valuable natural habitats for wildlife and fauna, are a part of the city's hydrologic system, and serve as groundwater recharge areas and wildlife corridors. Some of the city's prominent waterways include the Marina Lagoon (formally Seal Slough), San Mateo Creek, Polhemus Creek, and Laurel Creek. Other waterways in the city include Leslie Creek, Borel Creek, and the Marina Lagoon. Figure COS-3 shows waterways in San Mateo, including underground waterways.

While the creeks and riparian areas serve important ecological functions, they are also susceptible to stormwater runoff and pollution. The City strives to protect and improve the system of creeks so wildlife habitats can continue to thrive, current and future generations can continue to enjoy them, and the city's hydrologic system is more resilient to flooding and sea level rise.

This section provides policy direction for protecting and enhancing creeks. Goals and policies focused on water supply and flood-control infrastructure can be found in the Public Services and Facilities Element, and policies and actions to protect against flooding and sea level rise are in the Safety Element.



Figure COS-3 Waterways



Source: USGS and City of San Mateo Public Works; ESRI, 2022; PlaceWorks, 2023.



## GOALS, POLICIES, AND ACTIONS

**GOAL COS-3** Protect and improve San Mateo's creeks as valuable habitat and components of human and environmental health.

### POLICIES



**Policy COS 3.1 Aesthetic and Habitat Values – Public Creeks.** Preserve and enhance the aesthetic and habitat values of creeks, such as San Mateo, Laurel, and Beresford Creeks, and other City-owned channels in all activities affecting these creeks, including revegetation, rewilding, erosion control, and adequate setbacks for structures.



**Policy COS 3.2 Aesthetic and Habitat Values – Private Creeks.** Encourage preservation and enhance the aesthetic and habitat values of privately owned sections of all other creeks and channels, shown in Figure COS-3.

**Policy COS 3.3 Groundwater Protection.** Support the County of San Mateo's efforts to protect the quality and quantity of groundwater resources in the city.



**Policy COS 3.4 Groundwater Infiltration.** Protect existing open spaces, natural habitat, floodplains, and wetland areas that allow for percolation and infiltration of stormwater runoff to slow and reduce the flow of runoff and improve water quality and identify areas to protect when considering new development.



**Policy COS 3.5 Preservation of Beneficial Uses.** Manage Marina Lagoon to balance and enhance its beneficial uses. Manage other water bodies to allow for limited nearby recreation, such as picnicking, hiking, boating, sightseeing, and interpretive study.



## AIR QUALITY

Clean and safe air is essential to the health of everyone in San Mateo. While San Mateo benefits from fresh air that blows in from the bay and the Pacific Ocean, air quality remains a concern due to the serious and lifelong health impacts of exposure to air pollution. “Mobile sources,” including cars and trucks along US Highway 101 and State Route (SR-) 92, are a significant source of air pollution in San Mateo. While San Mateo and its neighbors do not include much heavy industry, smaller “stationary sources,” like gas stations and dry cleaners, also emit pollutants. Finally, natural sources, such as windblown dust and wildfire smoke from other parts of the state, can have drastic effects on air quality in San Mateo.

San Mateo neighborhoods do not have equal access to safe and clean air. For example, neighborhoods along US Highway 101, and around the US Highway 101/SR-92 interchange, are exposed to significantly more diesel particulate matter than neighborhoods in the hills or along the bay. These tiny particles, emitted by diesel engines in trucks, buses, and other heavy equipment, are particularly harmful because they are breathed deep into our lungs, and are known to increase cancer risk, asthma attacks, and chronic heart and lung disease. Improving air quality and health outcomes in equity priority communities is a theme throughout this General Plan.

This section provides policy direction on improving air quality throughout San Mateo. Some of the policies support mitigation measures focused on lessening air quality impacts, as identified in the General Plan 2040 Environmental Impact Report (EIR). Those policies that also serve as mitigation for air quality impacts are detailed, specific, and quantitative to meet the requirements of State environmental law.

## GOALS, POLICIES, AND ACTIONS

**GOAL COS-4** Goals, policies, and actions focused on equity priority communities can be found throughout the General Plan. The Land Use Element also includes goals and policies on environmental justice under Goal LU-8. All San Mateo residents should have the ability to breathe safe, clean air.

### POLICIES



**Policy COS 4.1 Air Quality Thresholds.** Use thresholds of significance that match or are more stringent than the air quality thresholds of significance identified in the current Bay Area Air Quality Management District (BAAQMD) Air Quality Guidelines when evaluating air quality impacts of projects.



**Policy COS 4.2 Health Risk Assessment.** Require new development not exempt from CEQA that includes sensitive receptors to prepare Health Risk Assessments. Identify appropriate mitigation, based on the findings of the Health Risk Assessment, to reduce health risks from major sources of toxic air pollution, such as high-volume roadways, stationary sources, permitted sources from BAAQMD, and warehousing.



**Policy COS 4.3 BAAQMD Planning for Healthy Places.** Require new development to adhere to BAAQMD's Planning for Healthy Places guidance when local conditions warrant.



**Policy COS 4.4 Activity Near Sensitive Receptors.** Comply with State regulations that prohibit nonessential idling of vehicles near sensitive receptors, such as the requirements outlined in Title 13 of the California Code of Regulations (CCR).



**Policy COS 4.5 Odors.** When proposed development generating odors is proposed near residences or sensitive receptors, either adequate buffer distances shall be provided (based on recommendations and requirements of the California Air Resources Board [CARB] and BAAQMD), or filters or other equipment/solutions shall be provided to reduce the potential exposure to acceptable levels. Potential mitigation associated with this policy requirement will be coordinated with any required permit conditions from BAAQMD.

When new residential or other sensitive receptors are proposed near existing sources of odors, either adequate buffer distances shall be provided (based on recommendations and requirements of CARB and BAAQMD), or filters or other equipment/solutions shall be provided to reduce the potential exposure to acceptable levels.



**Policy COS 4.6 Toxic Air Contaminants.** Require that when new development that would be a source of toxic air contaminants (TACs) is proposed near residences or sensitive receptors, either adequate buffer distances shall be provided (based on recommendations and requirements of CARB and BAAQMD), or filters or other equipment/solutions shall be provided to reduce the potential exposure to acceptable levels.

When new residential or other sensitive receptors are proposed near existing sources of TACs, either adequate buffer distances shall be provided (based on recommendations and requirements of CARB and BAAQMD), or filters or other equipment/solutions shall be provided to the source to reduce the potential exposure to acceptable levels.



**Policy COS 4.7 Air Quality Construction Impacts.** Require new construction and grading activities to mitigate air quality impacts generated during construction activities in compliance with BAAQMD's regulations and guidelines on construction activity impacts.



**Policy COS 4.8 Truck Facilities.** Require new development, when applicable, to provide adequate truck parking loading space, and generators for refrigerated trucks to prevent idling during truck operation.



**Policy COS 4.9 Air Pollution Exposure.** For new development that is located within 1,000 feet from US Highway 101 and State Route 92, require installation of enhanced ventilation systems and other strategies to protect people from respiratory, heart, and other health effects associated with breathing polluted air.

## ACTIONS



**Action COS 4.10 Air Quality Improvement.** Support and partner with Bay Area Air Quality Management District (BAAQMD) in monitoring, education, permitting, enforcement, grants programs, or other efforts to improve air quality issues and health outcomes for all.



**Action COS 4.11 Clean Air Refuges.** Develop and implement a plan to provide clean air refuges during times when outdoor air quality is unhealthy. Explore the feasibility of participating in State grant programs to fund retrofits of ventilation systems at public buildings to provide refuge for residents during periods of unhealthy air quality caused by excessive smoke from wildfires.

## PARKS AND RECREATION

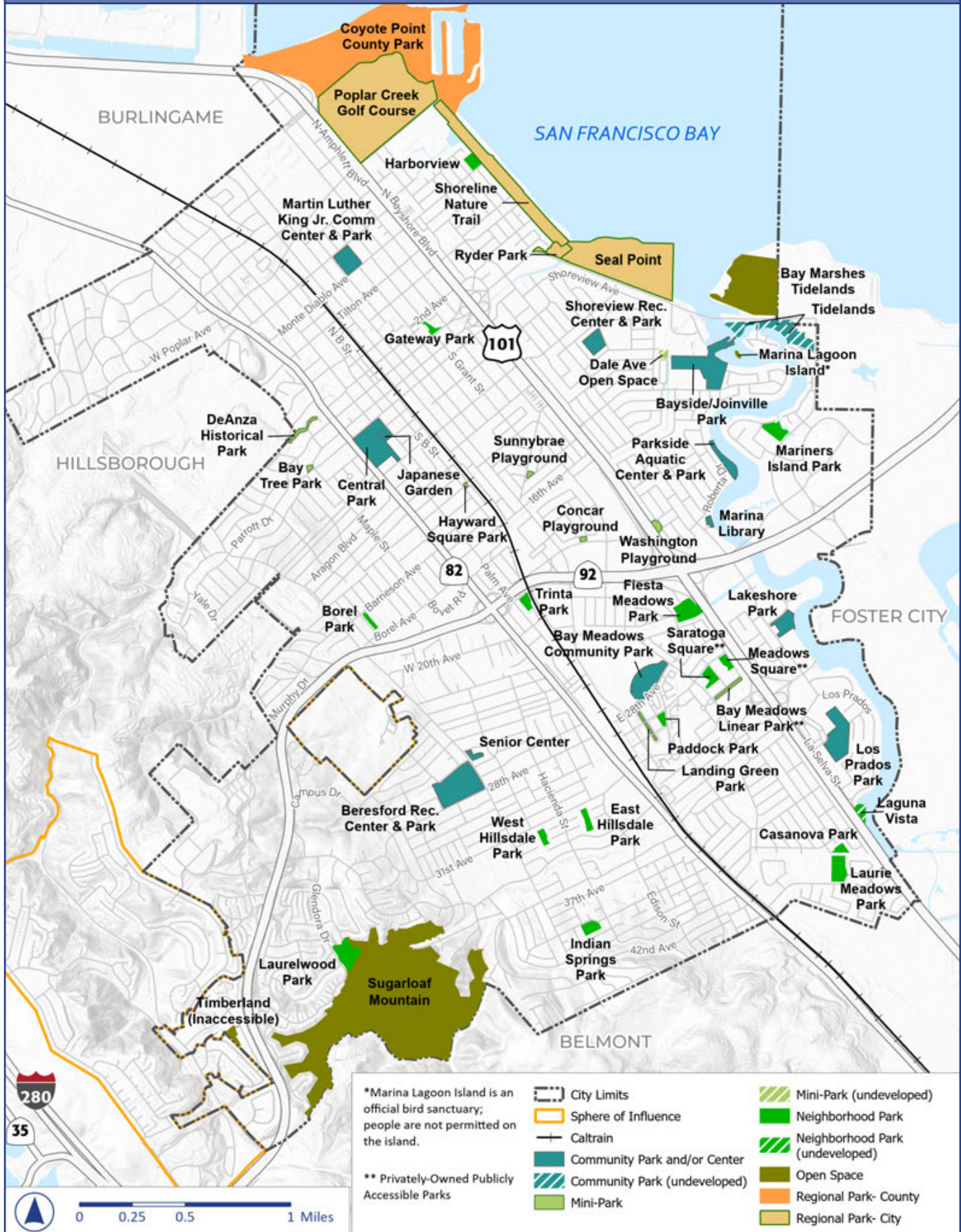
The City of San Mateo has a variety of parks and recreational facilities that provide community members with access to nature, encourages healthy lifestyles, and support a mixture of active and passive recreation opportunities. The City's park system includes more than a dozen neighborhood parks, nine community parks, six recreation/community centers, two pools, the Shoreline regional park system, several small "mini" parks, and an estuary lagoon for boating. Within the City Limits, the County of San Mateo owns and operates the 155-acre Coyote Point Recreation Area. Combined, the San Mateo community has access to approximately 795 acres of parks and open space, or 7.36 acres per every 1,000 residents. Figure COS-4 depicts the location of the parks and open spaces within San Mateo and Figure COS-5 shows a one-third-mile radius around each park and open space area. As shown in Figure COS-4, Marina Lagoon Island is a bird breeding and nesting site, which means people are not permitted on the island.

San Mateo offers many recreation facilities and programs for its members, guided by the Recreation Facilities Strategic Plan. The City's facilities include six recreation/community centers, two pools, and the 18-hole Poplar Creek Golf Course. People of all ages participate in the City's extensive menu of community activities, which includes youth and family aquatics, children's summer camps, adult fitness programs, teen programs, and interactive classes for older adults and seniors. Throughout the year, the City hosts special community events to foster community engagement and provide family friendly fun for San Mateo residents.

This section provides policy direction for parks, recreational programs, and facilities in San Mateo. Goals and policies focused on access to nature and the preservation of open space can be found under Goal COS-2 of this element. Other City services and facilities are addressed in the Public Services and Facilities Element, and expectations for the integration of parks and open spaces into new development are found in the Land Use Element.



Figure COS-4 Public Parks and Recreation Sites

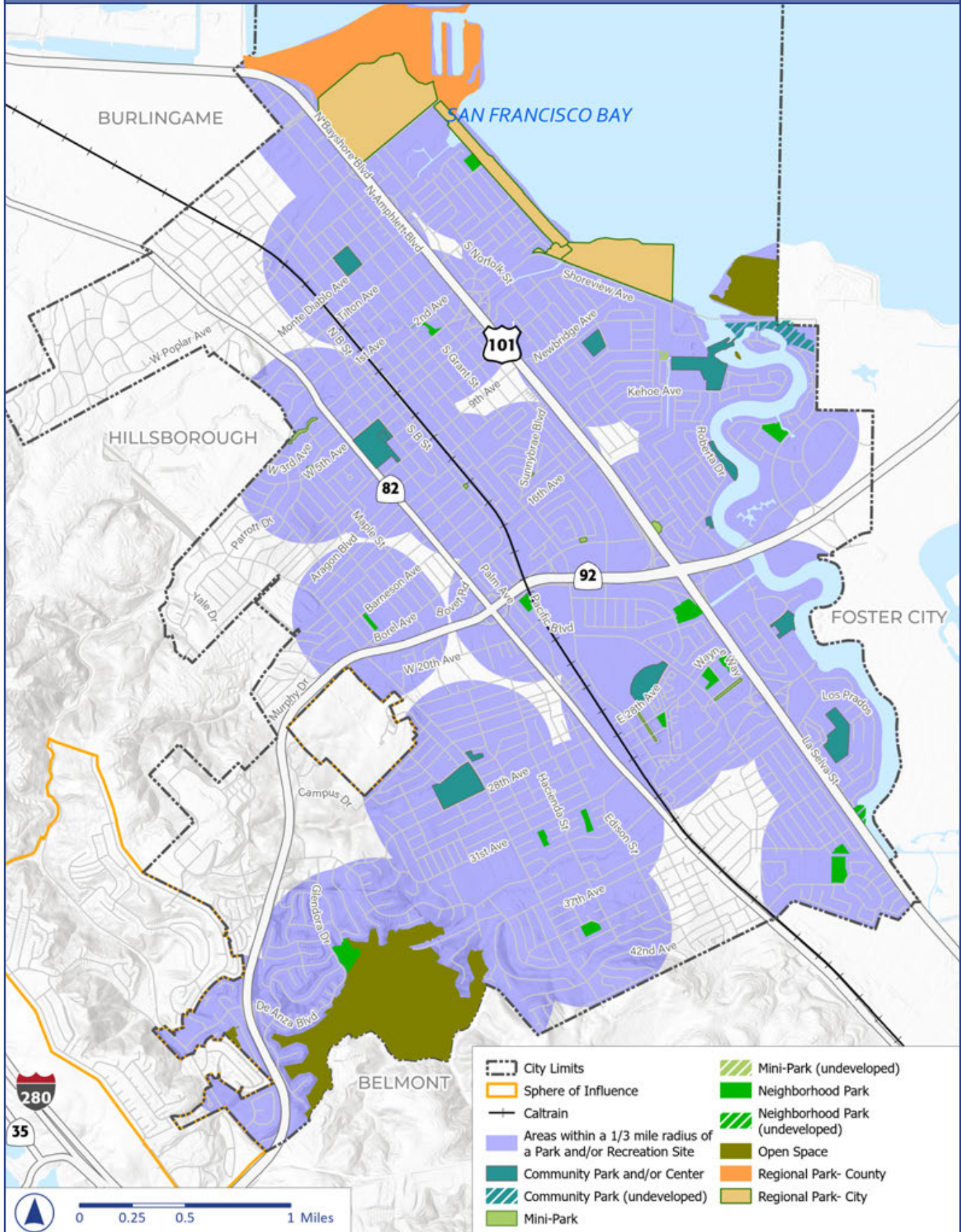


Source: ESRI, 2022; PlaceWorks, 2023.

Note: This map is included for informational purposes and is not adopted as part of this General Plan.



Figure COS-5 Public Parks and Recreation Sites Service Radius



Source: ESRI, 2022; PlaceWorks, 2023.

Note: This map is included for informational purposes and is not adopted as part of this General Plan.



## GOALS, POLICIES, AND ACTIONS

**GOAL COS-5** Provide a comprehensive system of park and recreation programs and facilities based on the needs of the city's residents to encourage healthy lifestyles and ensure access for all.

### POLICIES

**Policy COS 5.1 Active and Healthy Lifestyles.** Maintain and expand programs that promote active and healthy lifestyles and incorporate health and wellness practices into everyday life, such as healthy eating and nutrition education programs, water safety and swim programs, walking and bicycling as a mode of healthy transportation, and youth fitness activities.



**Policy COS 5.2 Creating Community.** Cultivate opportunities to come together as a community, celebrate our heritage, cultures, and milestones, and have social supports available, which are key to creating a sense of community and building community resilience.



**Policy COS 5.3 Creative Outlets.** Provide skill development and performance opportunities within each of the major art forms with an emphasis on promoting lifelong enjoyment to nurture creative discovery.

**Policy COS 5.4 Enrichment and Lifelong Learning.** Provide a wide array of enriching and lifelong learning opportunities that provide mental stimulation, self-improvement, exploration, educational opportunities, and skills that can be applied at home or business.



**Policy COS 5.5 Parks as Learning Environments.** Enhance the role of parks as learning environments by providing interpretive opportunities to community organizations and at City-operated facilities to increase public awareness of their unique cultural, historical, and environmental characteristics.



**Policy COS 5.6 Child and Youth Development.** Provide preschool through teenage youth with a variety of experiences that nurture individuality, spark imagination, encourage active recreation, and build the skills needed to ensure success in the next stage of development.



**Policy COS 5.7 Aging Adults.** Promote policies, programs, services, and public infrastructure improvements through either direct City provision or through collaborative partnerships with other agencies to ensure that older adults can age in place while feeling valued and supported.



**Policy COS 5.8 Community-Led Activity Initiatives.** Work with local community groups and San Mateo County Health to initiate walking, hiking, cycling, and other recreation clubs and activities to increase participation, safety, and social cohesion.



**Policy COS 5.9 Conservation and Nature Awareness.** Increase public awareness of the importance of and appreciation for conservation opportunities and the value of connecting children to nature with enhanced programs and public outreach.

**Policy COS 5.10 Community Gardens.** Support community gardens on sites with quasi-public uses and on publicly owned land, such as City parks or facilities, or as part of new private development, where feasible and appropriate.



**Policy COS 5.11 Central Park.** Promote Central Park's character as the City's signature park and community gathering place.

## ACTION

**Action COS 5.12 Coordination with Education Providers.** Coordinate with education providers, including local school districts, the College of San Mateo, and the San Mateo Public Library, to identify appropriate service targets and provide activities within those identified targets.

**GOAL COS-6** Provide equitable and convenient access to parks, recreational programs, and facilities so that all residents experience the physical and mental health benefits of parks and open space.

## POLICIES



**Policy COS 6.1 Accessible Facilities.** Continue to provide general park facilities that are free and open to the public, except for reservations of specific facilities by groups or individuals, or for facilities that traditionally charge fees (e.g., Golf Course, Marina Lagoon boat access). Address the lack of access to recreational facilities for neighborhoods east of El Camino Real, especially east of US Highway 101.

**Policy COS 6.2 Recreation Fee Assistance.** Continue to provide program fee assistance to qualifying families and older adults consistent with the Park and Recreation Commission-endorsed administrative policy for fee assistance.

**Policy COS 6.3 Privately Owned Public Spaces.** Require privately owned publicly accessible open space to be designed in a way that is welcoming for all, including public access signage and minimal physical or visual barriers, to ensure that the space is open and available to the community.

**Policy COS 6.4 Equitable Access Analysis.** When developing park master plans, include an equitable access analysis to identify deficiencies and potential solutions to address deficiencies found in the analysis.

## ACTIONS

**Action COS 6.5 Customer Service.** Adopt policies and practices that create satisfied customers and develop life-long relationships with our users.

**Action COS 6.6 Inclusion and Accessibility.** Create policies, programs, and facility designs that are age-integrated, inclusive, respectful, and supportive for all members of the community. Expand cultural awareness and appreciation through culturally relevant programs and special events.

**Action COS 6.7 Privately Owned Public Spaces Inventory.** Develop and maintain a list of all publicly accessible private open space in the city.



**Action COS 6.8 Resident Input.** Solicit a broad spectrum of resident input for major park improvements or park master plans. Conduct multilingual and culturally sensitive outreach to ensure all voices are included in park planning efforts and that San Mateo's parks reflect the diversity of the community.



**Action COS 6.9 Public Information.** Communicate through diverse channels and in multiple languages the benefits and value park and recreation services bring in making San Mateo a more livable, economically viable, and socially responsible community.

**Action COS 6.10 Technology Innovation.** Identify and incorporate technology innovations as an ongoing strategy to better serve the public, e.g., virtual trail maps, digitalized park signage, virtual programming.

**GOAL COS-7** Provide the appropriate mix of parks and facilities that balances the needs of active and passive facilities, allows formal and informal uses, is accessible for all residents, and meets existing and future recreation needs.

## POLICIES

**Policy COS 7.1 Facility Standards.** Use the Park and Recreation Facility Standards to assess the adequacy of existing facilities; to design, develop, and redevelop sites; and to acquire or accept new sites.

**Policy COS 7.2 Acreage Standards.** Acquire or accept for dedication two acres of neighborhood and community parks per 1,000 residents.

**Policy COS 7.3 Walkable Parks and Amenities.** Provide accessible public park or other recreational opportunities that are within approximately one-third of a mile (a 15-minute walk) of residents without travel over significant barriers. Ideally, one or more of the following amenities should be available: multipurpose turf area, children's play area with preschool and youth apparatus, seating areas, picnic areas, a multiuse court, and an opportunity for passive enjoyment of an aesthetically landscaped space.

**Policy COS 7.4 Passive Recreation.** Support efforts to create a passive recreation system that connects parks and nodes in the city to increase connectivity on select public rights-of-way for pedestrians.



**Policy COS 7.5 Active-Use Facilities.** Provide sufficient active-use facilities to support current needs and future trends, including, but not limited to, multiuse athletic turf areas; court games; action sports, e.g., bicycling; and a system of pedestrian and bicycle trails that will provide inter-connectivity between parks.

**Policy COS 7.6 Master Planning.** Continue to prepare and maintain master plans for all undeveloped parks and for those parks over two acres prior to development or major redevelopment. Allow interim uses if such uses will not adversely impact or limit potential permanent uses.

**Policy COS 7.7 Rehabilitation or Purchase of School Sites.** Consider contributions towards rehabilitation or the purchase of recreational facilities on surplus school sites based on an evaluation of their value as community recreation resources.

## ACTIONS

**Action COS 7.8 Regional Facilities.** Explore the feasibility of developing regional recreational and sports complexes with neighboring cities.

**Action COS 7.9 Bay Meadows Community Park.** Complete the master planning for Bay Meadows Community Park to reflect its value as a city-wide asset that can address one or more identified facility deficiencies.

**GOAL COS-8** Plan and develop well-designed parks and recreation facilities compatible with surrounding uses that promote accessibility, efficient use, and practical maintenance.

## POLICIES

**Policy COS 8.1 Rehabilitation Priorities.** Prioritize parks and recreation facilities projects that rehabilitate facilities that have become or will become costly to maintain, only marginally usable, meet the highest community needs, provide significant benefits in relation to costs, or are in equity priority communities.

**Policy COS 8.2 Park Preservation.** Preserve existing parklands, open spaces, and the golf course for open space, habitat, and recreational use.

**Policy COS 8.3 Shared Use.** Encourage schools to make their facilities available for City and community-sponsored activities to the greatest extent possible and encourage school agencies to adopt reasonable user fees and operating practices that allow improved community access.

**Policy COS 8.4 Optimum Cost-Effectiveness.** Proactively maintain and upgrade park infrastructure to optimize its cost-effectiveness and value in meeting community recreation needs.



**Policy COS 8.5 Sustainability Practices.** Operate park and recreation facilities using environmentally, socially, and economically sustainable management and operating practices that proactively reverse the impacts of climate change or better prepare for its effects.

**Policy COS 8.6 Maintenance Standards.** Maintain the park system by a set of maintenance standards that reflects community values; maintains, promotes, and optimizes positive use; reduces wildfire risk; and ensures that equipment and facilities are maintained in a safe condition.



**Policy COS 8.7 Environmentally Sound Park Operations.** Use native and drought-tolerant plant species, efficient irrigation systems, reclaimed water, and sustainable management practices. Expand efforts to improve recycling opportunities in all parks and implement trash-reduction measures, especially during large community events.

**Policy COS 8.8 San Mateo City Parks and Recreation Foundation.** Continue to support the San Mateo City Parks and Recreation Foundation efforts to expand non-city resource opportunities, such as funding and volunteers, in support of park development, improvements, and maintenance.

## ACTIONS

**Action COS 8.9 Recreation Facility Infrastructure.** Implement the highest-priority improvements identified from the Recreation Facilities Master Plan with special focus on improvements that address safety and accessibility, geographic equity, childcare, aquatics, and multigenerational programming.

**Action COS 8.10 Design Principles and Park Image.** Establish design principles for all new or renovated parks to maximize productivity, efficiency, and community value, including adding the potential for flexible use for emergency shelters and disaster response. Develop an image plan that includes the effective use of signage, color, lighting, and plant material that meets both aesthetic and maintenance needs.

**Action COS 8.11 Maximized Park Assets.** Review and update the Asset Management Plan to identify the highest and best use of undeveloped parcels or underutilized areas within existing parks to ensure they are best positioned to meet current and future needs.

**Action COS 8.12 Strategic Community Partnerships.** Develop and maintain positive partnership relations with schools, businesses, community groups, and civic organizations for park access, maintenance, and enhancement to maximize resources, eliminate duplication of effort, and reach common goals.

**Action COS 8.13 Neighborhood-Supported Projects.** Increase efforts to seek neighborhood support for enhancement and beautification projects as the City's fiscal resources become constrained. Prioritize enhancement and beautification efforts in equity priority communities.

**Action COS 8.14 School Facility Access.** Partner with local school districts to explore ways to expand public access to school facilities, including gymnasiums and swimming pools.



**GOAL COS-9** Provide stable and adequate operational and capital funding for the parks and recreation system.

## POLICIES

- Policy COS 9.1 Program Fees and Cost Recovery.** Maintain and periodically update program fees to recover costs.
- Policy COS 9.2 Maintenance and Operating Costs.** Consider long-term maintenance and operating costs in acquisition, development, and redevelopment decisions.
- Policy COS 9.3 Park Equipment and Maintenance.** Phase out the use of gas-powered equipment and increase the use of more environmentally friendly fertilization options in City parks and facilities over time.
- Policy COS 9.4 Parks and Facilities in Major Projects.** Factor park and facility maintenance and operating costs into park master plans or major facility upgrades.
- Policy COS 9.5 Development Fees.** Assess appropriate fees and taxes to ensure that new development contributes proportional funding to compensate for its impacts on recreation facilities and services.
- Policy COS 9.6 Cooperative Service Delivery.** Use opportunities for cooperative acquisition, development, operation, and programming with private organizations or other public agencies that will provide more effective or efficient service delivery.



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# CHAPTER 7

## Public Services and Facilities Element







CITY OF SAN MATEO  
City Hall



# PUBLIC SERVICES AND FACILITIES ELEMENT

## INTRODUCTION

Public services and facilities contribute to San Mateo's high quality of life. The City of San Mateo is committed to ensuring our community is safe and has adequate and equitable infrastructure and services. The Public Services and Facilities Element is not one of the required elements for a General Plan. However, the City understands the importance of public services and facilities, and the goals, policies, and actions in this element work to maintain and enhance these services as our community changes. This element covers the following topics:

- Community safety
- Water supply
- Wastewater and flood-control infrastructure
- Energy and telecommunications infrastructure
- Public facilities
- Child care and schools
- Healthcare and social services
- Solid waste

## RELEVANCE TO GENERAL PLAN THEMES



### Sustainability in this Element:

- Manages wastewater and stormwater to protect water quality in our waterways.
- Supports a resilient building stock that reduces or eliminates carbon emissions.
- Maintains the quality of public services as the city grows.
- Supports solid waste reduction and recycling.
- Supports plans for water management and conservation.



### Environmental Justice in this Element:

- Provides for the equitable distribution of public services and facilities throughout the city so that everyone, including vulnerable residents such as children, low-income households, and seniors, can continue to thrive in San Mateo.
- Supports efforts to explore creative options such as reduced permit fees, reduced impact fees, and tax incentives to provide better healthcare services in equity priority communities.
- Commits to code enforcement that advances equity.



### Community Engagement in this Element:

- Continues to support public facilities, such as libraries, schools, and child care centers that engage with the community and help them discover, enjoy, connect, and learn in an ever-changing world.
- Ensures that the San Mateo community is informed about potential public services and facilities improvements in their neighborhood by applying outreach and engagement strategies that encourage broad representation and are culturally sensitive.



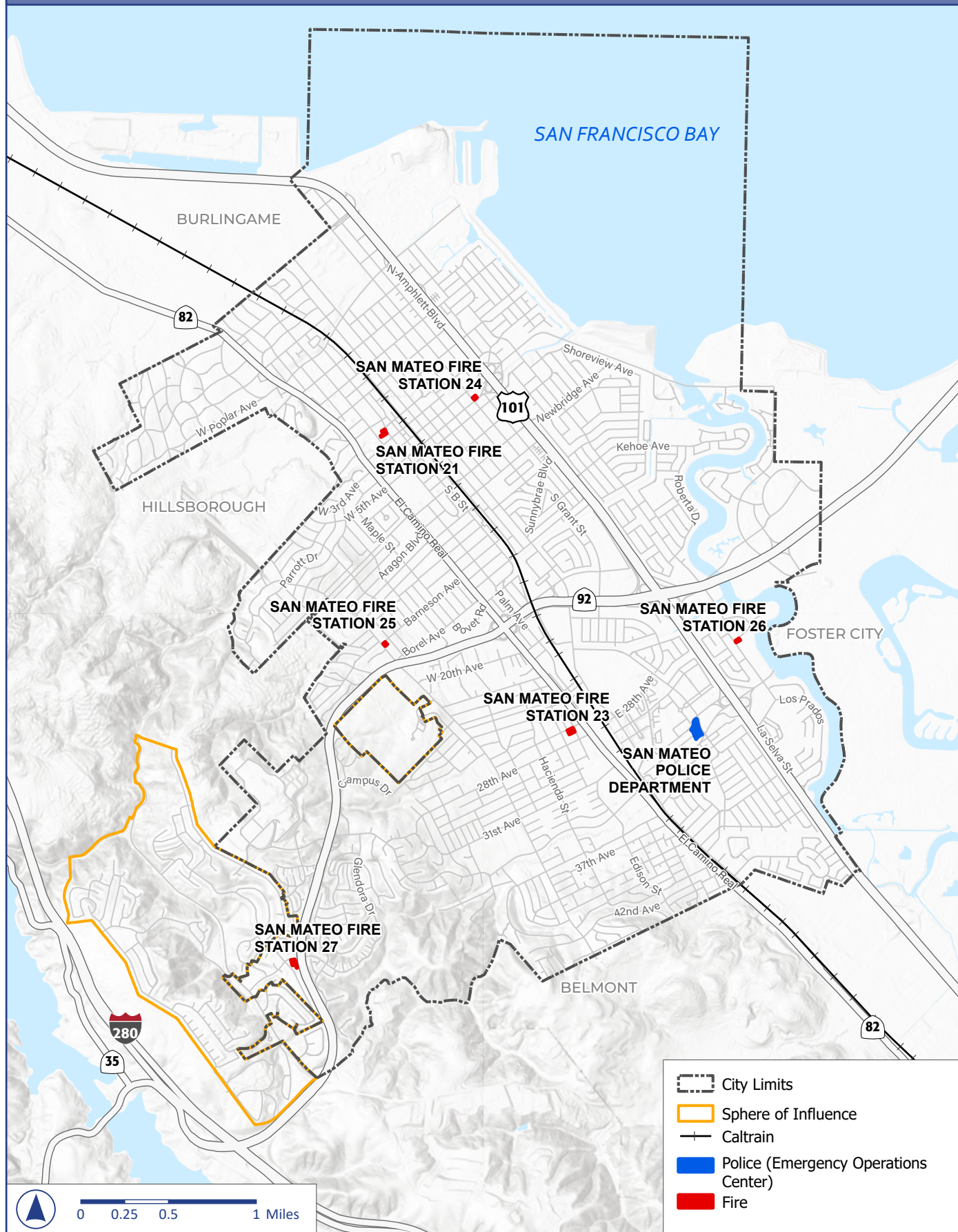
## COMMUNITY SAFETY

Community safety services, such as law enforcement, fire personnel, and Emergency Medical Service (EMS) Readiness are vital to protecting the community's health, safety, and welfare. The San Mateo Police Department (SMPD) is a 24/7 comprehensive community policing department that provides many types of services, including responding to crime, enforcing traffic and parking regulations, and working with the city's youth on education and community-building programs. Fire services are provided by the San Mateo Consolidated Fire Department (SMC Fire), a separate agency that serves San Mateo, Belmont, and Foster City. SMC Fire's goals are to meet the State fire protection requirements for all land uses. There are six fire stations in San Mateo, each of which has one fire engine staffed by one Fire Captain and two Firefighters/Engineers. Figure PSF-1 shows the police and fire stations in San Mateo.

The City works with the San Mateo County EMS to respond to medical emergency needs. The County's EMS system is a public/private partnership between a private consulting service that offers ambulance service and paramedic first response, fire service agencies in San Mateo County, and the County Health Services Department's EMS office.

While community safety services are invaluable to San Mateo, the City also recognizes and understands that code enforcement to address safety issues has the potential to both benefit and harm low-income households. The City believes and will work towards a future where code enforcement is used to advance equity, while still continuing to provide high-quality service to the community.

Figure PSF-1 Fire and Police Services



Source: City of San Mateo, 2022; ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.



## GOALS, POLICIES, AND ACTIONS

**GOAL PSF-1** Protect the community’s health, safety, and welfare by maintaining adequate police, fire, and life safety protection.

### POLICIES

**Policy PSF 1.1 Effective Police and Fire Services.** Maintain facilities, equipment, and personnel to provide an effective police force and fire protection to serve existing and future population and employment, as identified in the Land Use Element.

**Policy PSF 1.2 Police Station.** Provide police station facilities to meet the facility requirements through 2040. Distribute, locate, and design police support facilities (i.e., substations) as needed to maximize effectiveness, use, accessibility for police personnel, and community interaction.

**Policy PSF 1.3 Fire Stations.** Coordinate with and support San Mateo Consolidated Fire Department (SMC Fire) to maintain a high level of service by modernizing fire stations, as needed. Provide new stations and improvements to existing stations and training facilities to meet equipment, staffing, and training requirements, as well as Essential Services Building Requirements.

**Policy PSF 1.4 Fire Inspections.** Coordinate with and support SMC Fire to maintain fire inspection staffing levels to meet existing needs and the projected 2040 population, employment and development, and inspections mandated by other governmental agencies, consistent with the City’s Building Security Code.

**Policy PSF 1.5 Maintenance and Replacement.** Coordinate with and support SMC Fire to provide fire apparatus replacement and maintenance programs to achieve a high state of readiness.

**Policy PSF 1.6 Emergency Medical Service (EMS) Readiness.** Maintain the highest level of Emergency Medical Service (EMS) readiness and response capabilities possible by encouraging interagency medical drills and exercises where hospital personnel work with emergency responders in the field and with Emergency Operation Centers and by encouraging citizens to become trained in basic medical triage and first aid through the Community Emergency Response Team (CERT).



**Policy PSF 1.7 Equitable Code Enforcement.** Continue to use code enforcement to equitably enforce the City’s property maintenance codes to ensure that all residents, specifically those living in equity priority communities, have safe and sanitary living conditions.

## WATER SUPPLY

San Mateo receives water from two primary providers: the California Water Company (Cal Water) and Estero Municipal Improvement District (EMID). Cal Water's Mid-Peninsula District, which includes the City of San Carlos, serves the majority of San Mateo, while EMID provides services to the bayside portions of San Mateo east of Seal Slough and Foster City.

Cal Water and EMID distribute and sell water directly to consumers; however, both agencies receive their water supply from the San Francisco Regional Water System (SF RWS) operated by the San Francisco Public Utilities Commission (SFPUC). Most of San Mateo's current water supply comes from Hetch Hetchy reservoir and the Tuolumne River watershed in the Sierras, while the remaining supply comes from the Alameda Creek and San Mateo County watersheds. Figure PSF-2 identifies the watersheds in San Mateo.

Given that drought will be a persistent challenge in California and could affect future water supply, the City will continue to require water conservation and support alternatives to the current water supply to increase the resilience of this critical resource. In addition, the City will continue to explore strategies to increase the water supply such as the SF-Peninsula Regional PureWater project that would turn wastewater from San Mateo and other areas into drinking water.

This section focuses on policy direction for water supply and flood-control infrastructure. Policy direction for protecting and enhancing the city's waterways can be found in the Conservation, Open Space, and Recreation Element, and policies and actions to protect the community from flooding and sea level rise are in the Safety Element.

## GOALS, POLICIES, AND ACTIONS

**GOAL PSF-2** Support access to a safe, sustainable, and resilient supply of water for San Mateo.

### POLICIES



**Policy PSF 2.1 Supplemental Water Sources.** Support efforts by California Water Service, Estero Municipal Improvement District, and adjacent jurisdictions to develop supplemental and resilient water sources.

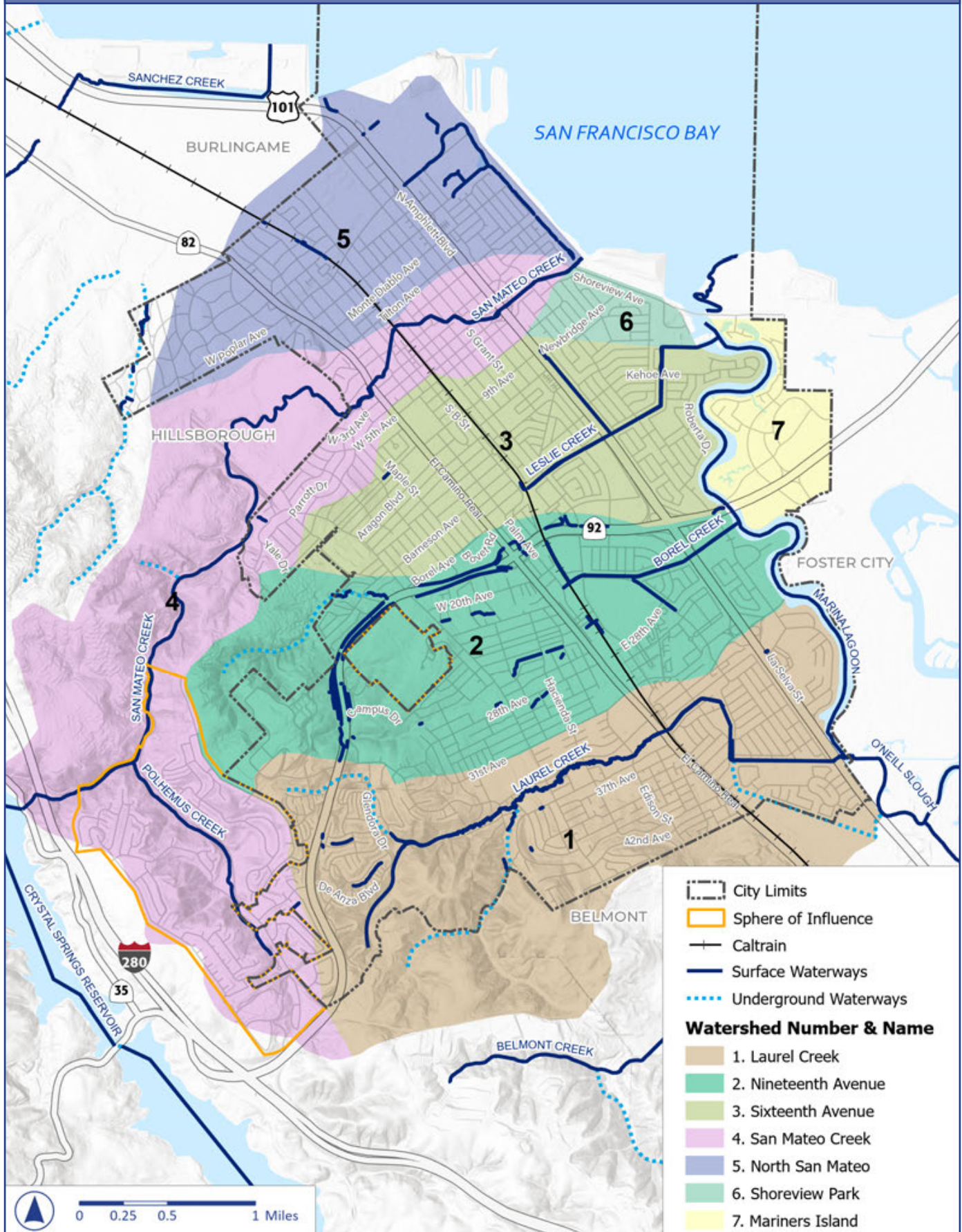


**Policy PSF 2.2 Water Supply Planning.** Coordinate with Cal Water and Estero Municipal Improvement District upon each update of their respective Urban Water Management Plans to ensure there is an adequate and sustainable water supply for current and future development.



**Policy PSF 2.3 Water Conservation.** Work with California Water Service, Estero Municipal Improvement District, Bay Area Water Supply Conservation Agency, and other mid-peninsula cities to support local, regional, and statewide water conservation efforts. Encourage all properties to convert to water-efficient landscaping.

Figure PSF-2 Watershed Areas



Source: City of San Mateo, 2022; USGS; ESRI, 2022; PlaceWorks, 2023.

Note: This map is included for informational purposes and is not adopted as part of this General Plan.



- Policy PSF 2.4 Water Supply for New Development.** Require applicants to provide will-serve letters from water purveyors prior to issuing building permits for new development to demonstrate that water supply is available.
- Policy PSF 2.5 Water-Conserving Fixture Retrofits.** Require that all residences and commercial properties that apply for a building permit for alternations or renovations provide proof of water-conserving plumbing fixtures.
- Policy PSF 2.6 Water Offset Requirements.** Require all new development or redevelopment projects to comply with the water conservation and offset policies and requirements imposed by California Water Service or Estero Municipal Improvement District, depending on the water service area in which the project is located.
- Policy PSF 2.7 Water Shortage Plans.** Coordinate with California Water Service and Estero Municipal Improvement District to conduct community outreach and take other steps to ensure compliance with their Water Shortage Contingency Plans during water shortages, such as a drought or supply interruption.
-  **Policy PSF 2.8 Water Efficiency.** Support increased water efficiency in all new development and existing building stock.

## ACTIONS

- Action PSF 2.9 Recycled Water.** Continue working with California Water Service, the San Francisco Public Utilities Commission, the Bay Area Water Supply & Conservation Agency, the City of Redwood City, and Silicon Valley Clean Water to develop an advanced water purification facility that treats wastewater from the San Mateo wastewater treatment plant to tertiary treatment standards.
- Action PSF 2.10 Water-Reduction Strategies.** Work with California Water Service, Estero Municipal Improvement District, Bay Area Water Supply Conservation Agency, and other mid-peninsula cities to promote water-reduction strategies and to create an outreach program that will help inform residents and businesses of increased costs, the need for conservation efforts, and available incentives and rebates.
- Action PSF 2.11 Water Purification Facility.** Continue working with California Water Service, the San Francisco Public Utilities Commission, the Bay Area Water Supply & Conservation Agency, the City of Redwood City, and Silicon Valley Clean Water to develop an advanced water purification facility that treats wastewater from the San Mateo wastewater treatment plan to tertiary treatment standards.
- Action PSF 2.12 Water Usage.** Work with Cal Water to collect and track water use by land use type and make this information available to the community.



## WASTEWATER AND FLOOD-CONTROL INFRASTRUCTURE

### Wastewater

Wastewater is produced by using sinks, flushing the toilet, showering, and doing laundry. Commercial services, industrial facilities, and other sources also create wastewater as a part of their normal business operations.

The City of San Mateo maintains wastewater infrastructure through the Department of Public Works. The City's wastewater system treats wastewater to create a healthy and sanitary environment. The City's wastewater system is made up of over 200 miles of sanitary sewer lines, more than 5,000 manholes, and dozens of sewer lift stations. A majority of the wastewater system is over 60 years old, and the City is in the process of upgrading the aging infrastructure. The Sewer System Management Plan, Integrated Wastewater Master Plan, and Clean Water Program are some of the key documents that will guide San Mateo with this effort.

This system moves the wastewater from where it is generated to the San Mateo Wastewater Treatment Plant, where the wastewater gets treated and eventually discharged into the San Francisco Bay. The wastewater treatment plant is jointly owned by the City of San Mateo, City of Foster City, and Estero Municipal Improvement District (EMID), and it serves more than 150,000 people and businesses at an average flow of 10 million gallons each day. Because of its location along the San Francisco Bay shore, upgrades to the wastewater treatment plant have been designed to anticipate and be resilient to impacts from rising sea levels.

## Flood-Control Infrastructure

The city encompasses seven major drainages, both artificial and natural, between the Santa Cruz Mountains and San Francisco Bay along the eastern side of the San Francisco Peninsula. Major watersheds include the North Shoreview District, San Mateo Creek, East Third Avenue, 16th Avenue Drain, 19th Avenue Drain, Laurel Creek, and Mariners Island. The City maintains the Laurel Creek Dam, has 80 miles of storm drain lines, and 10 pump stations that all discharge to San Francisco Bay. The city is also protected against high tides and wind-generated waves from San Francisco Bay through a three-mile bayfront levee system.



The Marina Lagoon is a 1,400-acre-foot water storage facility that was created from remnants of O’Neill Slough and Seal Slough and was dredged and leveed to provide flood protection and recreational opportunities. The lagoon captures water flowing from the 16th Avenue Drainage Channel, 19th Avenue Drainage Channel, and Laurel Creek. The three tributaries provide a source of freshwater runoff during the winter. Circulation and water quality in the Marina Lagoon are enhanced by allowing bay water from Belmont Slough to flow into the lagoon at the O’Neil Tide Gate.

The 2004 San Mateo Storm Drain Master Plan provides an assessment of capital improvement projects needed for flood protection. San Mateo’s flood-control infrastructure will continue to play a key role in protecting the community from both sea level rise and extreme storm events as the climate changes.

## GOALS, POLICIES, AND ACTIONS

**GOAL PSF-3** Maintain sewer, storm drainage, and flood-control facilities adequate to serve existing needs, projected population, and employment growth and that provide protection from climate change risk.

### POLICIES

**Policy PSF 3.1 Sewer System.** Provide a sewer system that safely and efficiently conveys sewage to the wastewater treatment plant. Implement the Sewer System Management Plan to ensure proper maintenance, operations, and management of all parts of the wastewater collection system.

**Policy PSF 3.2 Sewer Requirements for New Development.** Require new multifamily and commercial developments to evaluate the main sewer lines in the project vicinity, which will be used by the new development and make any improvements necessary to convey the additional sewage flows.



**Policy PSF 3.3 Sewer Overflow Reduction.** Eliminate sanitary sewer overflows, which create a public health hazard for residents and compromises the water quality of the city's creeks, Marina Lagoon, and San Francisco Bay.

**Policy PSF 3.4 Wastewater Treatment Plant.** Operate, upgrade, and maintain the Wastewater Treatment Plant to ensure ongoing wastewater treatment in compliance with regulatory requirements.

**Policy PSF 3.5 Interagency Coordination for Wastewater Planning.** Coordinate future planning of the sewer collection and wastewater treatment plant with the other users of the systems, including the Estero Municipal Improvement District (City of Foster City), the Crystal Springs County Sanitation District, Town of Hillsborough, and City of Belmont.

**Policy PSF 3.6 Stormwater System.** Operate, upgrade, and maintain a stormwater drainage and flood-control system that safely and efficiently conveys runoff to prevent flooding and protect life and property; minimizes pollutants discharging to creeks and San Francisco Bay; manages stormwater as a resource and not a waste; and protects against the impacts of climate change.



**Policy PSF 3.7 Water Quality Standards.** Manage City creeks, channels, and the Marina Lagoon to meet applicable State and federal water quality standards. Protect and restore creeks to a level acceptable for healthy marine and bird habitat.

**Policy PSF 3.8 Stormwater Pollution Prevention.** In accordance with requirements in the Municipal Regional Stormwater Permit, implement programs, plans, and policies to ensure pollutants are minimized in stormwater runoff.



**Policy PSF 3.9 Low-Impact Development.** Minimize stormwater runoff and pollution by encouraging low-impact design (LID) features, such as pervious parking surfaces, bioswales, and filter strips in new development.



**Policy PSF 3.10 New Creekside Development Requirements.** Require that new creekside development protect and improve setbacks, banks, and waterways adjacent to the development projects to increase flood protection and enhance riparian vegetation and water quality. Prevent erosion of creek banks.

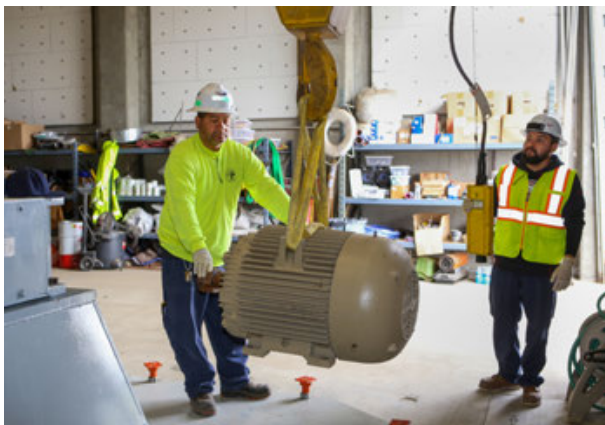


**Policy PSF 3.11 Hydrologic Impacts of Creek Alteration.** Ensure that improvements to creeks and other waterways do not cause adverse hydrologic impacts, adversely affect adjacent properties, or significantly increase the volume or velocity of flow of the subject creek.

**Policy PSF 3.12 Levee System.** Continue to assess, maintain, and upgrade the City's levee system. Collaborate with the Federal Emergency Management Agency, OneShoreline, and neighboring agencies to ensure adequate flood control and sea level rise protection.

## ACTIONS

- Action PSF 3.13 City Infrastructure Studies and Master Plans.** Develop and coordinate studies and master plans to assess infrastructure and to develop a Capital Improvement Program for necessary improvements. Incorporate climate change risks, such as the impacts of droughts, increasing storm events, sea level rise, and groundwater changes in the planning process.
- Action PSF 3.14 Stormwater Treatment.** Continue to participate in the San Mateo Countywide Stormwater Pollution Prevention Program to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) permit to prevent water pollution from point and non-point sources.
- Action PSF 3.15 Green Infrastructure.** Implement the City's Green Infrastructure Plan to gradually shift from a traditional stormwater conveyance system ("gray") to a more natural system that incorporates plants and soils to mimic watershed processes, capture and clean stormwater, reduce runoff, increase infiltration, and create healthier environments ("green").
- Action PSF 3.16 Stormwater Pollution Prevention Education.** Partner with other agencies and organizations, such as Flows to Bay, to help inform residents and businesses of ways to protect water quality and prevent stormwater pollution.
- Action PSF 3.17 Stormwater Requirements for Development.** In accordance with State regulatory mandates, require applicable new and redevelopment projects to incorporate site design, source control, treatment, and hydromodification management measures to minimize stormwater runoff volumes and associated pollutants. Stormwater management via green infrastructure systems shall be prioritized.
- Action PSF 3.18 Incentives for Low-Impact Development.** Develop and implement incentives to encourage applicants to include low-impact design features in new development.



# ENERGY AND TELECOMMUNICATIONS INFRASTRUCTURE

## Energy

In San Mateo, energy mostly comes from electricity and natural gas. Pacific Gas and Electric Company (PG&E) and Peninsula Clean Energy (PCE) provide electrical services. PCE purchases electricity that is produced from renewable energy sources and works with PG&E to distribute the electricity to consumers in San Mateo. PG&E is the sole provider and distributor of natural gas services.

Because electric utilities serving San Mateo offer clean electricity options, much of San Mateo's electricity already comes from carbon-free sources. Residents and businesses in PCE's service area, including San Mateo, are automatically enrolled in PCE's ECOplus service, which is distributed to customers through PG&E's existing grid infrastructure. Both PCE and PG&E are required by State law to accelerate the deployment of renewable energy to achieve a standard of at least 60 percent renewable electricity by 2030 and 100 percent electricity from carbon-free sources by the end of 2045. Increasing the amount of locally distributed energy resources from renewable sources, such as rooftop solar energy systems, will reduce the cost of electricity for residents and businesses and enhance the local economy. The City is also pursuing policies and building code changes that will require new and existing buildings to use all-electric energy sources and eliminate natural gas as an energy source. By expanding on-site electricity generation and storage, San Mateo will reduce greenhouse gas emissions and become more resilient to grid failures and power disruptions.

Additional policies and actions that connect energy use and climate change are in the Land Use Element.

## Telecommunications

Telecommunications services, which include wireless internet, cell phone and wireline telephone, cable television, and satellite television, are offered by multiple service providers in the City of San Mateo. Mobile telephone service and wireless internet service is offered by multiple companies, which gives San Mateo residents and businesses a variety of options when choosing a mobile telephone and/or internet service provider.

The backbone of wireless networks consists of long-haul fiberoptic cables that connect major internet hubs over long distances. In San Mateo County, long-haul fiberoptic cables run north to south throughout the county. These networks can be expanded using small cell facilities, which are single small antennae placed on existing utility poles or streetlights along with small pole-mounted radios and other accessory equipment. They help wireless service providers meet the growing demand for wireless services. In general, as of 2019, residential and commercial broadband service levels in San Mateo are consistent with San Francisco Bay Area averages, according to the California Broadband Mapping Program.

## Utility Undergrounding

Undergrounding electrical lines and telecommunications infrastructure helps improve safety and community aesthetics with the added benefits of a more reliable utility and increased property values.



Placing electrical lines underground reduces wildfire risks by eliminating the potential for live electrical wires to ignite fires. Utilities placed underground are also protected from wind and storm events that often disrupt service. Personal safety is also improved by removing the potential for live-wire contact injuries and reducing collision points for automobiles and people, especially those with vision or mobility disabilities, through the removal of utility poles. Although there are many benefits to utility undergrounding, the primary disadvantage is it is more costly to underground utilities compared to the traditional overhead configuration. The City will continue to require private developers to underground utility service connections for new development and underground existing overhead lines when justifiable. The City will also continue to work with PG&E and other utility providers to underground new and existing overhead infrastructure as opportunities arise and funding permits.

## GOALS, POLICIES, AND ACTIONS

**GOAL PSF-4** Promote the development of a clean energy supply, energy-efficient technology, and telecommunications facilities that benefit all members of the community.

### POLICIES



**Policy PSF 4.1 Clean Energy.** Support the advancement of a carbon-neutral energy supply.



**Policy PSF 4.2 Energy Conservation.** Support efforts to reduce per-capita energy use.

**Policy PSF 4.3 Building Electrification.** Require electrification for new building stock and reduce fossil fuel usage for existing building stock at the time of building alteration.



**Policy PSF 4.4 Energy Resilience.** Require new development projects to incorporate energy-efficiency measures, electric equipment, solar energy systems, and battery storage into their projects (Building Integrated Photo-Voltaic/BIPV) and encourage existing development to incorporate solar energy systems and battery storage.



**Policy PSF 4.5 Grid Resilience.** Support PG&E's efforts to improve grid resilience and capacity to meet increased electrical demand.



**Policy PSF 4.6 Renewable Energy Neighborhood Microgrids.** Encourage the establishment of renewable energy neighborhood microgrids to support resilience.

**Policy PSF 4.7 Service Improvement and Expansion.** Seek to ensure adequate energy and communication systems to serve existing and future needs while minimizing impacts on existing and future residents by requiring new development to underground power lines and provide underground connections, when feasible, and prioritizing cellular coverage for all areas of the city while appropriately minimizing visual impacts of cellular facilities, antennas, and equipment shelters.

**Policy PSF 4.8 Access and Availability.** Work with service providers to support access to and availability of a wide range of state-of-the-art telecommunication systems and services for households, businesses, institutions, and public agencies in San Mateo.

**Policy PSF 4.9 Coordinate Infrastructure Improvements.** Combine, to the extent possible, upgrades and repairs to public infrastructure, such as roadways with utility needs, broadband upgrades, bicycle and pedestrian improvements, and levees.

**Policy PSF 4.10 Private Utility Undergrounding.** Require new private development to underground service connections onto private property.

**Policy PSF 4.11 Public Wi-Fi.** Provide high-speed internet access to the public at all City facilities.

## ACTIONS

**Action PSF 4.12 Dig Once.** Establish a “dig once” policy, coordinating utility and roadway construction to avoid digging up the right-of-way multiple times, to reduce costs and impacts on the public right-of-way. The policy shall apply to infrastructure, utilities, and broadband whenever possible.

**Action PSF 4.13 Utility Network Undergrounding.** Underground existing electrical and communication transmission and distribution lines in the public right-of-way as funds permit.

**Action PSF 4.14 Utility Undergrounding Requirements.** Amend the San Mateo Municipal Code to require new private development to underground utilities and service connections on and adjacent to the site and to install and maintain signs, streetlights, and street landscaping adjacent to sidewalks.



**Action PSF 4.15 Renewable Energy.** Increase new annual installations of solar or renewable energy systems. Partner with Peninsula Clean Energy to study and implement a sustainable and resilient system that can be used as a pilot program for locally generated power not reliant on outside power sources.



**Action PSF 4.16 Solar Energy.** Promote local partnerships and rebate opportunities that make solar and battery storage simpler and more affordable while ensuring that the permit process is quick and inexpensive.



## PUBLIC FACILITIES

San Mateo’s public facilities provide a range of community services that support and enrich the lives of the city’s residents. The San Mateo Public Library operates three physical libraries that have services, programs, and resources for members of all ages, such as Project Read – an adult literacy program, activities for teens, and a Job Seekers Center. It also has an eLibrary that allows users to borrow digital copies of printed material. Other public facilities include City Hall, the Corporation Yard, and the Senior Center and the Martin Luther King Jr. Community Center. The City is proud to provide these services and facilities for its residents, and it will continue to ensure that all San Mateo residents, particularly those in vulnerable communities such as youths, low-income households, and seniors have access to well-maintained facilities that serve their needs.

The San Mateo County Events Center is a public facility within the city, but it is owned and operated by the County. The Events Center covers 48 acres and includes a park, outdoor space, and 195,000 square feet of meeting space for trade events, corporate meetings, sporting events, festivals, etc.

For background information and policies about the City’s park and recreation facilities and programs, please refer to the Conservation and Open Space Element.

## GOALS, POLICIES, AND ACTIONS

**GOAL PSF-5** Maintain and develop public facilities, and ensure they are equitably available to all current and future members of the community.

### POLICIES



**Policy PSF 5.1 Equitable Facilities.** Ensure that all San Mateo residents and employees have access to well-maintained facilities that meet community service needs. Encourage the development of facilities and services for vulnerable communities, such as children, low-income households, and seniors, in a variety of settings.



**Policy PSF 5.2 Joint Use.** Encourage joint use and public-private partnerships where feasible.

**Policy PSF 5.3 City Hall.** Consider upgrading or expanding City Hall to ensure sufficient space is available and consider establishment of a downtown facility or civic campus to support City staffing and service needs through the year 2040 and beyond.



**Policy PSF 5.4 Library Resources and Services.** Continue to maintain a comprehensive collection of resources and services to help the community discover, enjoy, connect, and learn in an ever-changing world. Continue to offer quality library services and programs to a diverse community promoting literacy and lifelong learning. Maintain a materials budget, staffing, and service hours for the City's library system that are adequate to meet the community needs and meet the continuing changes in information technology.

**Policy PSF 5.5 Library Facilities.** Maintain capital investment for essential repairs and space-enhancements to meet current and future needs of library patrons and community organizations.

**Policy PSF 5.6 Cultural and Entertainment Facilities.** Encourage the establishment of cultural and entertainment facilities in the downtown core and allow these types of uses to fulfill retail frontage requirements.

**Policy PSF 5.7 Incentives for Public Facilities.** Provide incentives to developers to encourage space for public facilities in new development.



**Policy PSF 5.8 Martin Luther King Jr. Community Center.** Improve and maintain the Martin Luther King Jr. Community Center as an important neighborhood-serving community and recreational facility in the North Central Equity Priority Community.

**Policy PSF 5.9 Corporation Yard.** Maintain corporation yard facilities with functions such as vehicle repair facilities, equipment and material storage, and administrative office space to support City operational needs.

**Policy PSF 5.10 San Mateo County Events Center.** Promote the physical and aesthetic improvement of the San Mateo County Events Center.



**Policy PSF 5.11 Inclusive Outreach.** Notify the community of potential public services and facilities improvements in their neighborhood. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.

## CHILD CARE AND SCHOOLS

Although the City doesn't have direct control over educational institutions, it can support local schools through efforts like coordinating on construction and improvements, calming traffic along student travel routes, and communicating about major projects and planned growth to help all parties adequately prepare for the future.

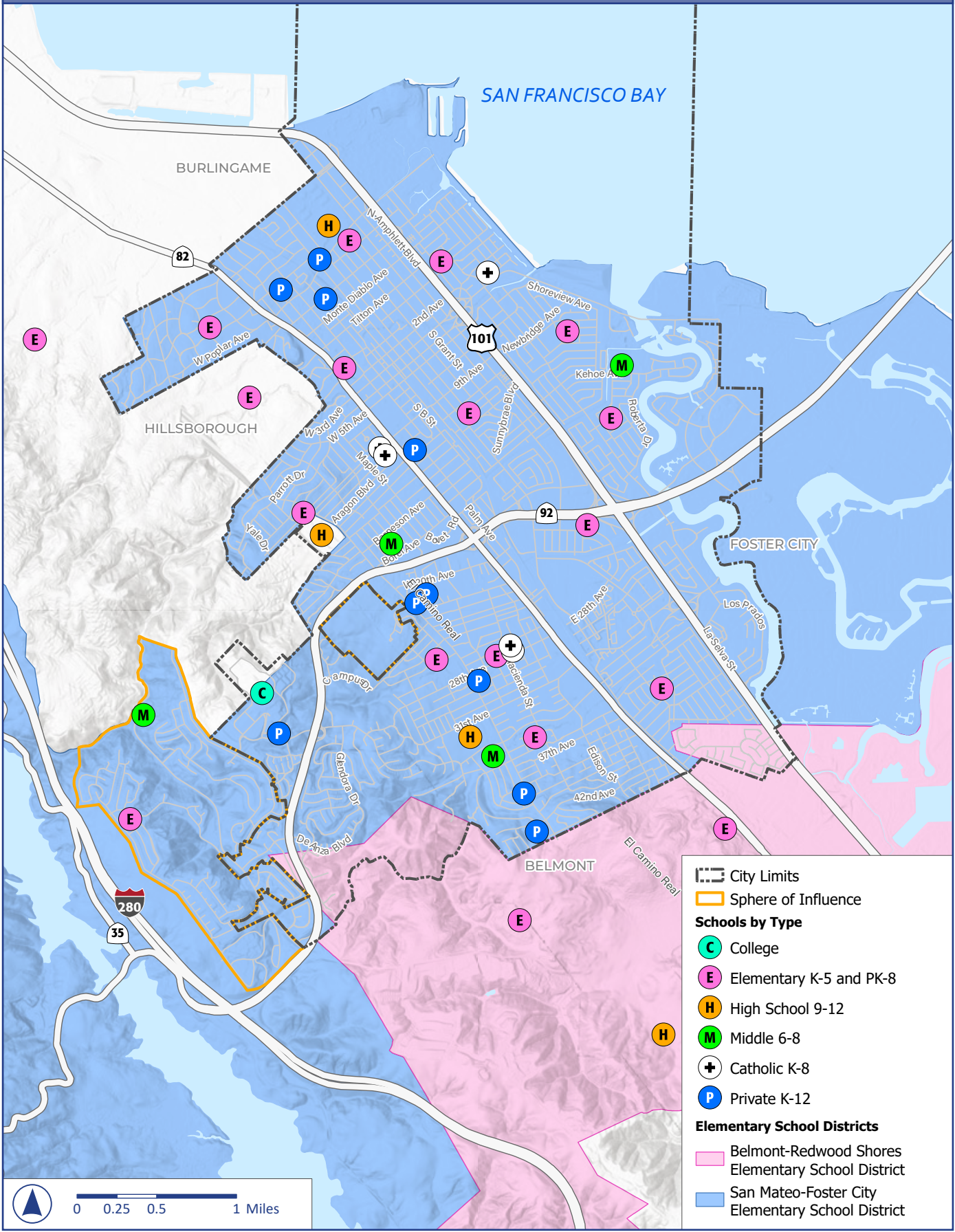
Within the City Limits, there are four public school districts with 19 public elementary, middle, and high schools; the College of San Mateo; and multiple K-12 private schools. A majority of the public school students in San Mateo attend elementary and middle schools through the San Mateo-Foster City School District, and high school through the San Mateo Union High School District, as shown in Figures PSF-3 and PSF-4. Public school students in southern portions of the city adjacent to Belmont are within the Belmont-Redwood Shores Elementary School District and the Sequoia Union High School District. All four public school districts are highly ranked for their quality of education when compared to districts across the San Francisco Bay Area.

The San Mateo County Community College District (SMCCCD) operates the College of San Mateo, a community college that offers associate degrees and certificate programs. These include the Associate in Arts Degree for Transfer (AA-T) and Associate in Science Degree for Transfer (AS-T), which offer guaranteed admission to the California State University system.

Child care facilities are important components of the city's infrastructure. However, working families have historically struggled to find child care services in San Mateo. Affordable and high-quality child care services that are equitably distributed throughout the city allow parents, grandparents, and guardians to work and contribute to the local economy. The City is committed to increasing child care facilities within its City Limits. In 2004, the City adopted a Child Care Development Fee for new residential and commercial development to fund child care facilities. Recognizing the ongoing need to address this challenge, the City will continue to collaborate with child care providers, employers, young families, and other stakeholders and support policies to provide more child care facilities in San Mateo.



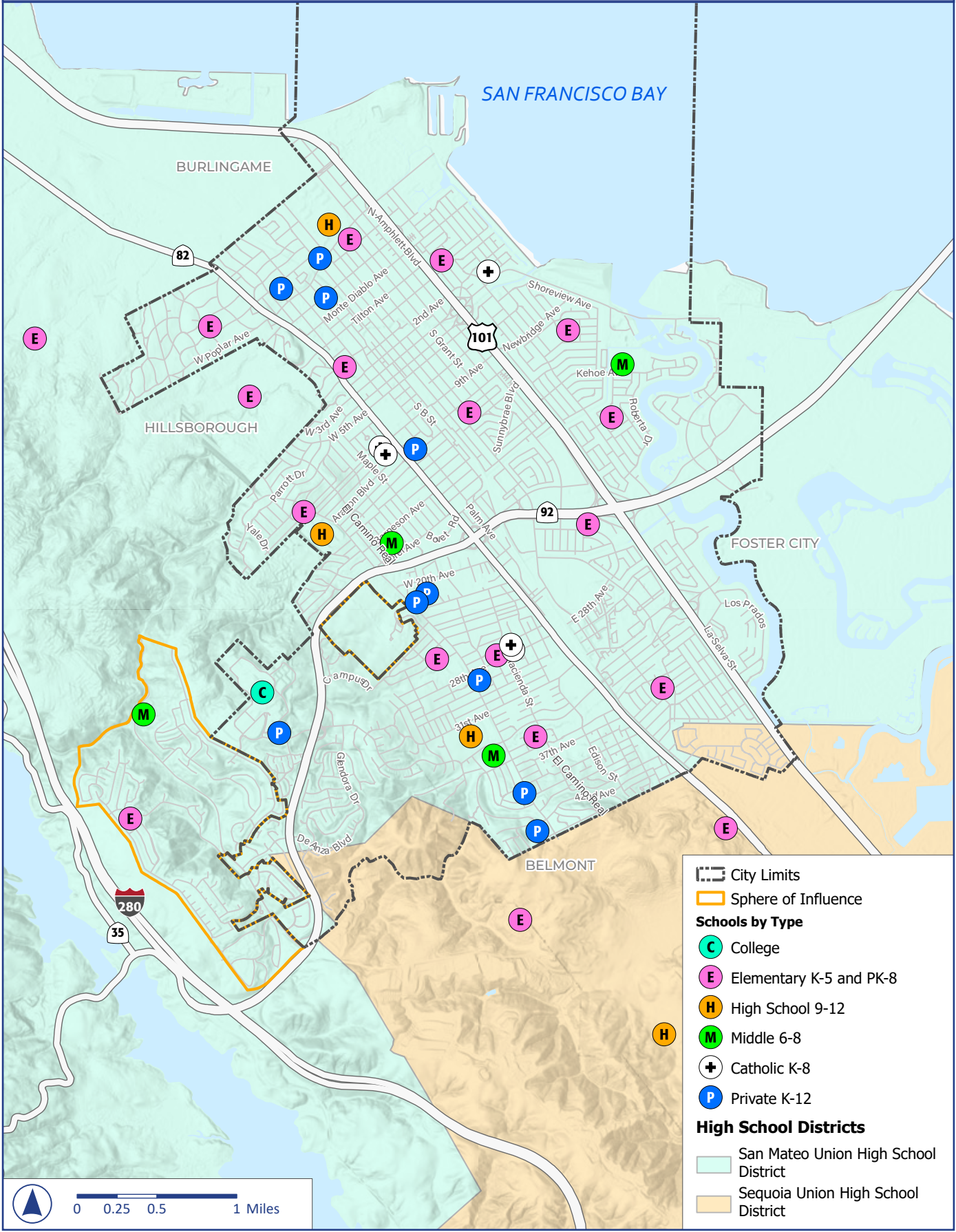
Figure PSF-3 School Sites and Elementary School Districts



Source: City of San Mateo, 2022; ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.



Figure PSF-4 School Sites and High School Districts



Source: City of San Mateo, 2022; ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.

## GOALS, POLICIES, AND ACTIONS

**GOAL PSF-6** Foster the healthy development and education of children of all abilities, incomes, and backgrounds.

### POLICIES

- Policy PSF 6.1 School Assistance.** Support efforts by the school district to maintain facilities, equipment, and personnel to provide quality public education to students in San Mateo.
- Policy PSF 6.2 Child Care Needs.** Support the provision of child-care programs and facilities to meet the needs of children of all abilities, incomes, and backgrounds through 2040.
- Policy PSF 6.3 Provision of Child Care.** Encourage public and private agencies and employers to provide child-care services and facilities.
- Policy PSF 6.4 Child Care Centers at Public and Quasi-Public Facilities.** Encourage retention of existing child care centers and support programs at public and private school sites and other quasi-institutional facilities because of their suitability for such uses and proximity to adjacent residential neighborhoods.
- Policy PSF 6.5 Child Care Centers in Residential and Employment Areas.** Encourage child care centers in residential neighborhoods where they meet City standards and at employment centers.

### ACTIONS

- Action PSF 6.6 School District Coordination.** Maintain effective, collaborative relationships with all local school districts.
- Action PSF 6.7 Child Care and New Construction.** Encourage new residential and nonresidential development to include space for child care by taking the following actions:
- Provide incentives for inclusion of space for a child care center in a new development.
  - Promote child care to developers as an amenity favored by the City.
  - Continue to implement the developer impact fee for funding child care facilities.



## HEALTHCARE AND SOCIAL SERVICES

### Healthcare

Healthcare facilities in San Mateo, such as hospitals, clinics, and pharmacies, and social services in neighborhoods help to create a healthier city where residents can take care of their physical and mental health and social welfare. In San Mateo, two of the biggest healthcare providers are the San Mateo County Hospital, a public hospital operated by the San Mateo County Health Department, and Mills Health Center, a healthcare facility that is part of Sutter Health's Mills-Peninsula Medical Center. These facilities provide community members access to a diverse range of care, including primary care, emergency services, dental care, cancer services, behavior health care, mental illness, gynecology and women's health, and more.

### Social Services

The City of San Mateo does not directly provide social services but does have partnerships with and provide finance assistance to agencies and community-based organizations to provide social services to residents who need support.

The San Mateo County Department of Human Services has offices across the San Francisco Peninsula where community members can receive assistance to participate in State and federal social welfare programs.



Community Health Advocates, a statewide nonprofit, collaborates with the City of San Mateo to provide insurance counseling and advocacy for Medicare recipients. Social Vocational Services (SVS), another California-wide nonprofit, has a local office in the city where community members with development/intellectual differences can participate in unique programs that are tailored to their needs. Locally based nonprofit organizations, such as Peninsula Family Services and Samaritan House San Mateo, support children, families, older adults, and community members in need with a variety of social services programs that not only enrich the individuals but also contribute to a better community.

## GOALS, POLICIES, AND ACTIONS

**GOAL PSF-7** Support access for all residents to healthcare facilities, social services, and other important community health amenities.

### POLICIES

- Policy PSF 7.1 San Mateo County Hospital.** Encourage the County to maintain County Hospital services in the city to provide access to medical care for all residents.
- Policy PSF 7.2 Mills Health Center.** Support the Mills Health Center remaining in San Mateo and encourage the continued provision and expansion of high-quality medical care services.
- Policy PSF 7.3 Health Centers.** Support the development of healthcare centers and the County's efforts to provide mobile clinics that are dispersed throughout the city. Avoid the concentration of health centers in any one neighborhood.
- Policy PSF 7.4 Social Services.** Support the provision of social services. Balance the need for social services in each neighborhood while ensuring that services are dispersed throughout the city and not concentrated in any one neighborhood.
- Policy PSF 7.5 Vulnerable Populations.** Support local religious institutions, nonprofit organizations, and community-based organizations in providing services and facilities for vulnerable populations.

### ACTIONS

- Action PSF 7.6 Community Healthcare Facilities.** Evaluate options to support existing and potential community healthcare facilities in equity priority communities through a variety of mechanisms, such as reduced permit fees and reduced impact fees. (Environmental Justice)
- Action PSF 7.7 Incentives for Support Services.** Study and, as feasible, implement economic incentives to encourage and sustain the development of support service uses, particularly in equity priority communities.

## SOLID WASTE

The City contracts with a private waste management company to provide residential and commercial solid waste collection, composting, and recycling services to San Mateo. Solid waste is transferred to the Shoreway Environmental Center in San Carlos where recyclable materials are sorted and separated. The remaining solid waste is disposed of at the Los Trancos Canyon (Ox Mountain) landfill in Half Moon Bay.

Solid waste in landfills emits methane, a powerful greenhouse gas, as it decomposes. Efforts to divert waste away from landfills helps reduce greenhouse gas emissions and raises awareness of our individual impact on the environment. Educational campaigns to repair, reduce, reuse, and recycle have helped reduce trash generation. In addition, State laws requiring many kinds of solid waste to be diverted from landfills have also significantly decreased the amount of trash that ends up in a landfill. Between 2015 and 2022, the City achieved a diversion rate of 73 percent. This means that close to three-quarters of all debris produced in the city is sent to recycling, composting, or alternative fuel centers instead of the landfill. The City aims to continue to increase this diversion rate over the life of this General Plan through ongoing active leadership to reduce trash and increase source reduction, recycling, and composting.

## GOALS, POLICIES, AND ACTIONS

**GOAL PSF-8** Reduce the generation of solid waste and increase the diversion of waste from landfills.

### POLICIES



**Policy PSF 8.1 Solid Waste Disposal.** Support waste reduction and diversion programs to reduce solid waste materials in landfill areas in accordance with State requirements.



**Policy PSF 8.2 Recycling.** Support programs to recycle solid waste and require provisions for on-site recycling in new development, in compliance with State requirements.



**Policy PSF 8.3 Composting.** Maintain the curbside composting program and expand composting of organics in accordance with State requirements.

### ACTION



**Action PSF 8.4 Waste Reduction.** Reduce waste sent to landfills by San Mateo's residents, businesses, and visitors, as required by State law and San Mateo Municipal Code, by mandating recycling and compost programs, setting aggressive waste-reduction goals for all development, and implementing appropriate solid waste rates to recover cost of services provided. Supportive actions for waste reduction are detailed in the Climate Action Plan.

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# CHAPTER 8

## Safety Element









# SAFETY ELEMENT

## INTRODUCTION

General Plans in California must identify and address potential natural and human-caused hazards that could affect the City of San Mateo's residents, businesses, visitors, environment, and services. The framework established by the Safety Element anticipates these hazards and prepares the community to reduce exposure to these risks. San Mateo is at risk from a number of natural and human-caused hazards. Climate change is likely to make many of these hazards more damaging for people, buildings and structures, ecosystems, and other important community assets.

The Safety Element does not exist in a vacuum but is instead one of several plans that address public health, safety, and related topics, including the Local Hazard Mitigation Plan, the Emergency Operations Plan, and the Climate Action Plan. The Safety Element must be consistent with these other plans to minimize conflicts between documents and ensure the City has a unified strategy to address safety and hazard issues.

The City of San Mateo is committed to the preservation of life, property, and the environment during emergencies. The City implements the most recent version of the San Mateo County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), which assesses risks from natural and human-caused hazards, including risks to people and facilities, and identifies mitigation actions to reduce or eliminate hazard risks in the county. The MJHMP for the County of San Mateo planning area, which includes the City of San Mateo, was developed in accordance with the Disaster Mitigation Act of 2000 and followed the Federal Emergency Management Agency's (FEMA's) 2011 Local Hazard Mitigation Plan guidance. The MJHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are identified, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short-term and long-term strategies, involve planning, policy changes, programs, projects, and other activities. The MJHMP can be found on the City of San Mateo's website and at <https://www.smcgov.org/ceo/2021-multijurisdictional-lhmp>. The current MJHMP, certified by FEMA, is incorporated into this Safety Element by reference, as permitted by the California Government Code.

The focus of this element is on increasing resilience throughout the city and reducing the risk of hazards. This element is organized around six key topics that are important to the San Mateo community.

- Emergency Readiness and Emergency Operations
- Geologic and Seismic Hazards
- Flood Hazards
- Sea Level Rise
- Wildfire Hazards
- Hazardous Materials





## RELEVANCE TO GENERAL PLAN THEMES



### **Sustainability in this Element:**

- Ensures the maintenance of City-owned trees that will provide relief from extreme heat, reduce energy use, and sequester greenhouse gas emissions.
- Encourages the use of natural systems to protect the community against sea level rise, which will provide shoreline habitat and capture greenhouse gas emissions.
- Ensures the cleanup of hazardous materials contaminated sites.



### **Environmental Justice in this Element:**

- Focuses emergency readiness activities in equity priority communities and most vulnerable areas of the city.
- Prioritizes locating critical facilities and resilient infrastructure outside of hazard-prone areas.
- Expands and increases resiliency of existing community facilities to better serve neighborhoods that are currently underserved.
- Provides emergency preparedness and public safety education for equity priority communities in formats and languages consistent with the demographics of the city.



### **Community Engagement in this Element:**

- Informs the community about safe and effective evacuation through notifications.
- Ensures inclusive outreach about potential hazards affecting neighborhoods, fire-safe education, and overall public safety.
- Supports Community Emergency Response Team (CERT) training in collaboration with San Mateo Consolidated Fire Department (SMC Fire).



## EMERGENCY READINESS AND EMERGENCY OPERATIONS

Emergency preparedness activities in the city are conducted through SMC Fire. The SMC Fire Chief coordinates with the City Manager to prepare for and respond to acute events like heat emergencies, wildfires, and flooding. This department, along with the City Manager, is responsible for the operation of the City's Emergency Operations Center, which coordinates the City's emergency planning, training, response, and recovery efforts for emergencies such as fires, floods, earthquakes, acts of terrorism, public safety power shutoff (PSPS) events, extreme weather events, and pandemics. SMC Fire also provides the public with access to a CERT training program to help residents be prepared for disasters.

San Mateo uses the San Mateo County Alert Notification System (SMC Alert) and, other notification systems, to reach the community and distribute emergency information and instructions before, during, and after a disaster. Notifications are provided through telephone calls, text messages, email notifications, and various social media platforms. Other emergency alert systems include the national Emergency Alert Systems (EAS), the California Governor's Office of Emergency Services (CalOES)-operated Emergency Digital Information System (EDIS). These systems are available in multiple languages.

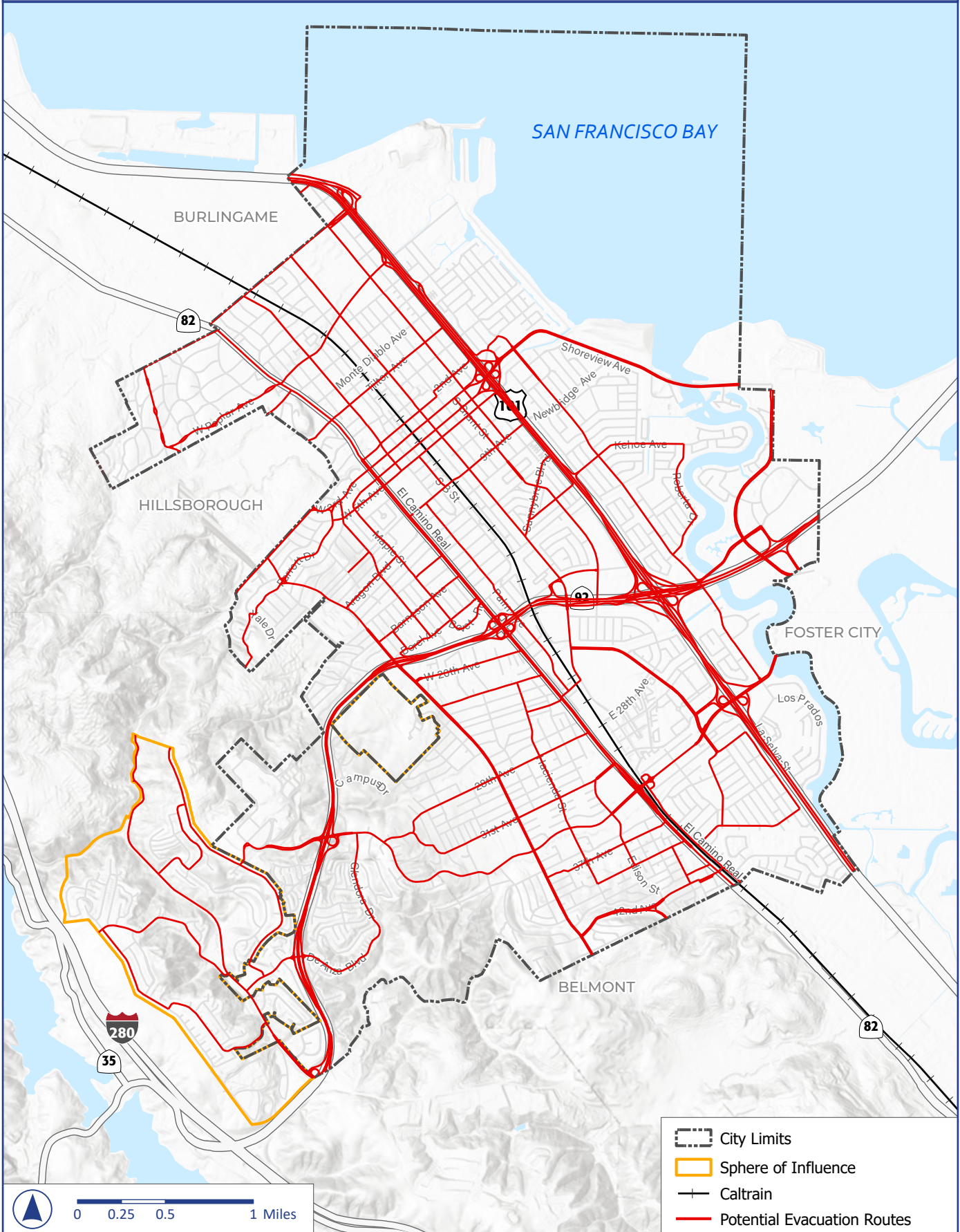
The City participates in the California Master Mutual-Aid Agreement, which is designed to ensure that adequate resources, facilities, and other support are provided to jurisdictions whenever their own resources are insufficient to cope with the needs of a given emergency. The State Office of Emergency Services Coastal Administrative Region (Mutual Aid Region II) serves the mutual-aid region that encompasses San Mateo County. Automatic-aid pacts with San Mateo County and surrounding cities provide additional emergency management and response services to the City of San Mateo during and after a disaster.

With advanced warning, evacuation can be effective in reducing injury and loss of life during a catastrophic event. The City of San Mateo uses a comprehensive evacuation support system implemented by San Mateo County. The system provides the community with critical evacuation updates, resources, and latest updates on active incidents. In the event of a wildfire or an emergency situation, the San Mateo Police Department and SMC Fire can issue evacuation warnings or evacuation orders for impacted areas.

Figure S-1 shows the evacuation routes throughout the city. All evacuation routes in San Mateo may be disrupted by a landslide, wildfire, or flooding event, which may block and damage the roadways or collapse bridges. In the event of widespread disruption to local evacuation routes, the remaining evacuation routes may become congested, slowing down evacuation of the community or specific neighborhoods.

An analysis of San Mateo's roadway network and parcels, as shown in Figure S-2, was conducted as part of Strive San Mateo General Plan 2040. It identifies several evacuation-constrained residential parcels, or parcels with less than two ingress/egress routes, spread throughout the city. The majority are these parcels are in the western hillsides and east of US Highway 101, at the edge of the City Limits. Many of the evacuation-constrained parcels in these areas could be subject to damage from wildfires, flooding, or sea level rise. All evacuation-constrained parcels are in a least one hazard-prone area. The lack of multiple emergency access points limits roadway access for these properties, creating difficulties if there is a need to evacuate.

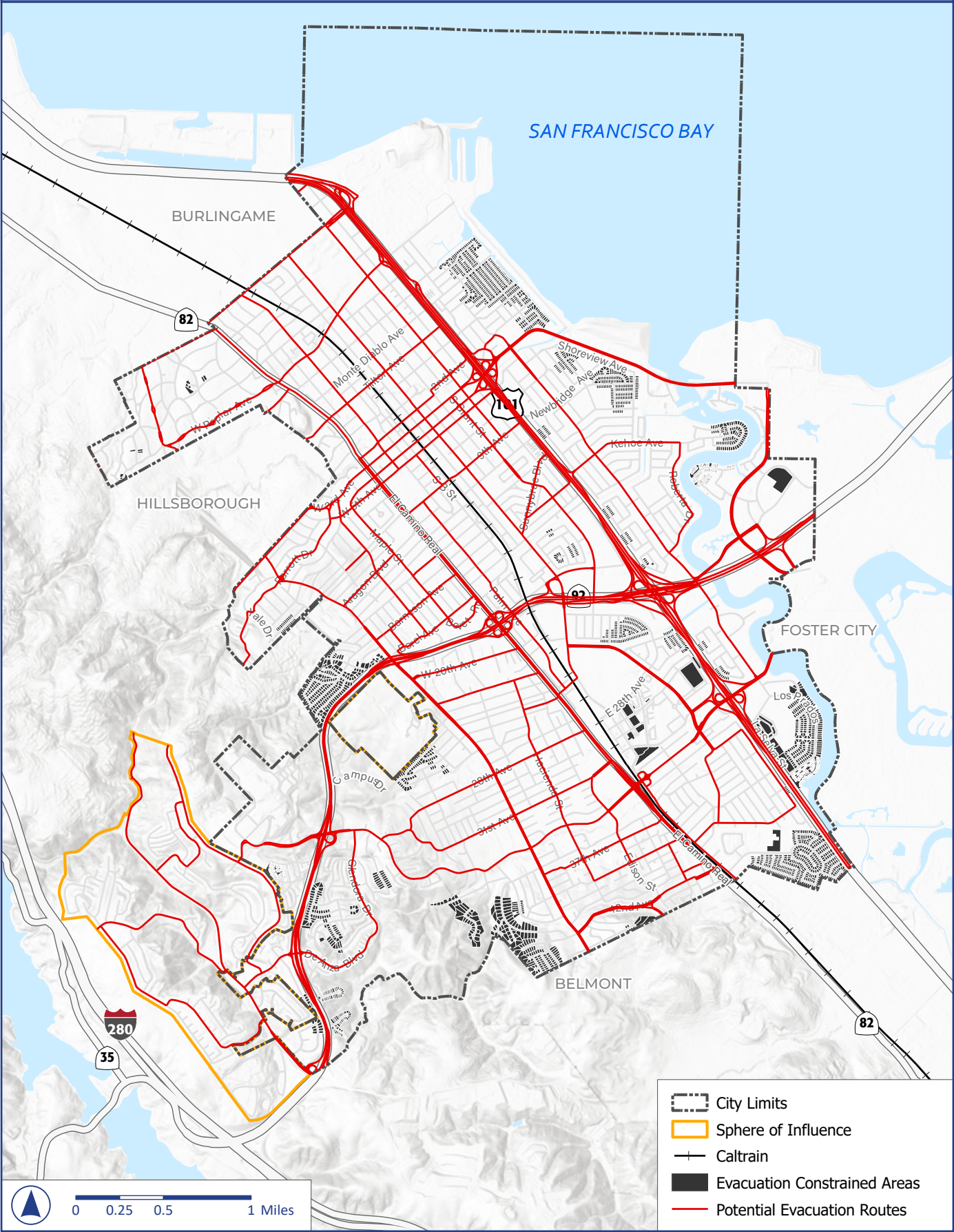
Figure S-1 Potential Evacuation Routes



Source: ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.



Figure S-2 Evacuation-Constrained Areas



Source: ESRI, 2022; PlaceWorks, 2023.

## GOALS, POLICIES, AND ACTIONS

**GOAL S-1** Minimize potential damage to life, environment, and property through timely, well-prepared, and well-coordinated emergency preparedness, response plans, and programs.

### POLICIES



- Policy S 1.1 Emergency Readiness.** Maintain the City's emergency readiness and response capabilities, especially regarding hazardous materials spills, natural gas pipeline ruptures, fire hazards, wildland fire risk, earthquakes, pandemics, and flooding. Focus primarily on areas identified by the City as underserved and most vulnerable to loss of life and property due to proximity to hazardous incidences, and work to ensure funding is available to these communities as a key component of emergency readiness.
- Policy S 1.2 Local Hazard Mitigation Plan.** Incorporate by reference the San Mateo County Multi-jurisdictional Local Hazard Mitigation Plan, approved by the Federal Emergency Management Agency (FEMA) in 2021, along with any future updates or amendments, into this Safety Element in accordance with Government Code Section 65302.6.
- Policy S 1.3 Location of Critical Facilities.** Avoid locating critical facilities, such as hospitals, schools, fire, police, emergency service facilities, and other utility infrastructure, in areas subject to slope failure, wildland fire, flooding, sea level rise, and other hazards, to the extent feasible.
- Policy S 1.4 Multiple Egress Points.** Require new development to provide at least two points of emergency access (ingress and egress).
- Policy S 1.5 Emergency Planning Document Coordination.** Pursue integration of the City's existing safety and emergency management documents with one another, including this Safety Element, the Local Hazard Mitigation Plan, and other related documents.
- Policy S 1.6 Emergency Infrastructure and Equipment.** Maintain and fund the City's emergency operations center in a full functional state of readiness. Designate a back-up Emergency Operations Center with communications redundancies.
- Policy S 1.7 Defensible Design.** Require that new development support effective law enforcement and fire protection by promoting a safe and accessible public realm, including investing in social gathering spaces, enhancing lighting and safety in public spaces through community-led planning, and ensuring adequate property maintenance.
- Policy S 1.8 Response Times.** When reviewing and analyzing roadway improvements, consider how emergency response times can be maintained and improved without reducing roadway user safety.

**Policy S 1.9**

**Local Utility Cooperation.** Work with local utility operators to coordinate any disruption in services, such as a public safety power shutoff (PSPS) event or other disruption that may be necessary to reduce hazard risks in San Mateo and/or the surrounding area, and support publication of advanced notification and resources to residents in the city, particularly equity priority communities, to help them prepare.

**Policy S 1.10**

**Disaster Recovery.** Ensure that the City government continues to operate during and after hazard events and is able to provide resources and guidance to people and institutions in San Mateo for recovery and reconstruction following the end of the hazard event.

**Policy S 1.11**

**Evacuation Education.** Include information about safe and effective evacuation as part of natural disaster awareness, prevention, and community education and training efforts. Share information about how to prepare for evacuations, potential evacuation routes and shelter locations, how to receive notifications, and other relevant topics.

**Policy S 1.12**

**Inclusive Outreach.** Notify the community of potential hazards affecting their neighborhood. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.

**Policy S 1.13**

**Emergency Training.** Conduct training for all City employees to ensure basic understanding of Disaster Service Worker responsibilities, the State Emergency Management System, National Incident Management System, and the Incident Command System.

**Policy S 1.14**

**Multijurisdictional Cooperation.** Continue the development of local preparedness plans and multijurisdictional cooperation and communication for emergency situations.

**Policy S 1.15**

**Emergency Preparedness.** Coordinate with San Mateo County, neighboring cities, and nongovernmental partners to effectively prepare for and respond to hazards and natural disasters.

## ACTIONS

**Action S 1.16**

**Evacuation Routes.** Maintain adequate evacuation routes as identified by arterial streets shown in the Circulation Element, Figure C-3. Evaluate each evacuation route's feasibility using a range of hazard criteria. Update this map on a regular basis to reflect changing conditions and State requirements for evacuation routes.

**Action S 1.17**

**Regular Updates.** Update the Safety Element with each Housing Element update, or every eight years, as necessary, to meet State and local requirements.

**Action S 1.18**

**Automatic and Mutual-Aid Agreements.** Participate in mutual-aid agreements with other local jurisdictions to provide coordinated regional responses, as necessary, to fire, flood, earthquake, critical incidents, and other hazard events in San Mateo and the surrounding area. Work with local jurisdictions to share resources and develop regional plans to implement disaster mitigation and resilience strategies, such as government continuity, emergency operations centers, and communications redundancies.



**Action S 1.19 Community Centers and Recreation Spaces.** Create an inventory of existing community center facilities and recreation spaces and assess their readiness to serve as a community shelter during a disaster. Following the inventory, create a facilities improvement plan that addresses deficiencies found in each facility or recreation space to improve resilience and disaster preparedness in the city.



**Action S 1.20 Rebuilding Priorities.** Establish rebuilding priorities and procedures in the event of a major disaster to expedite reconstruction and enhance access to funding opportunities with special emphasis on equity priority communities that are more vulnerable to climate hazards.

**Action S 1.21 Resilient Power Systems.** Explore the feasibility of on-site power generation and storage at City facilities to reduce reliance on regional power infrastructure in case of a hazard-caused power outage.



**Action S 1.22 Public Safety Outreach.** Develop a public safety education program to increase public awareness of potential hazards, City's emergency readiness and response program, and evacuation routes. Target public education programs to segments of the community that are most vulnerable to hazards and safety risks.



**Action S 1.23 Community Training.** Collaborate with SMC Fire to provide emergency preparedness trainings to maintain and expand existing Community Emergency Response Teams (CERTs).

**Action S 1.24 Emergency Infrastructure and Equipment.** Establish systems to ensure that traffic lights at major intersections, communications and radio infrastructure, and other critical infrastructure continues to function in the event of a localized power outage. Repair any damaged sets of infrastructure or equipment as needed to continue City operations.

**Action S 1.25 Continuity of Operations.** Regularly review, update, and implement the San Mateo Continuity of Operations/Continuity of Government Plan.

**Action S 1.26 Response Time Study.** Conduct a Response Time Study to provide a data-driven understanding of how future roadway safety improvements could impact emergency response times and use this information to adjust proposed roadway improvements as needed.

**Action S 1.27 Emergency Notification System.** Develop an emergency notification system (e.g., SMC Alert and Nixle) for flood-prone neighborhoods and businesses before, during, and after a climate hazard event, to assist with evacuation and other support activities. This includes coordination with the San Mateo County Flood and Sea Level Rise Resiliency District (One-Shoreline) on its early flood warning notification system.



## GEOLOGIC AND SEISMIC HAZARDS

San Mateo is in a region of high seismicity with numerous local faults. The California Geological Survey classifies faults as “active” when they have ruptured the ground surface within the last 10,000 years, while “potentially active” faults are those formed during approximately the last 2 to 3 million years. There are two major active faults that run within six miles of the city:

- San Andreas Fault
- San Gregorio Fault

Movement on any of these two faults or other fault lines in the region could cause earthquakes, fault rupture, and liquefaction. A number of earthquakes of magnitude 5.0 or more have occurred in and near San Mateo over the last 35 years. Earthquakes are caused by a sudden dislocation of the Earth’s crust or a fault rupture, which is when the Earth’s crust slides in opposite directions along the fault line. Figure S-3 shows where the most severe ground shaking would occur from an earthquake.

The Alquist-Priolo Earthquake Fault Zoning Act is a State law that limits development along active faults in areas known as Alquist-Priolo Fault Zones. The city may also be subject to tsunami hazards from earthquakes, which is discussed in more detail in the Flood Hazards section.

A secondary effect of seismic activity is liquefaction, which occurs when sandy or silty soil materials become saturated during ground shaking and liquefy. This can damage pipelines, cause roadways and airport runways to buckle, and damage or destroy building foundations. Figure S-4 shows the potential liquefaction areas in the city. Areas along the shoreline and east of US Highway 101 are most susceptible to liquefaction.

Other non-seismic geologic hazards are landslides and erosion, which can occur gradually, continuously, or suddenly, often with disastrous results. In San Mateo, landslides are often triggered by heavy rain, so the potential for landslides largely coincides with severe storms that saturate steep, loose soils. Earthquakes can also trigger landslides, and western areas of the city are highly susceptible to landslides, as shown in Figure S-4.

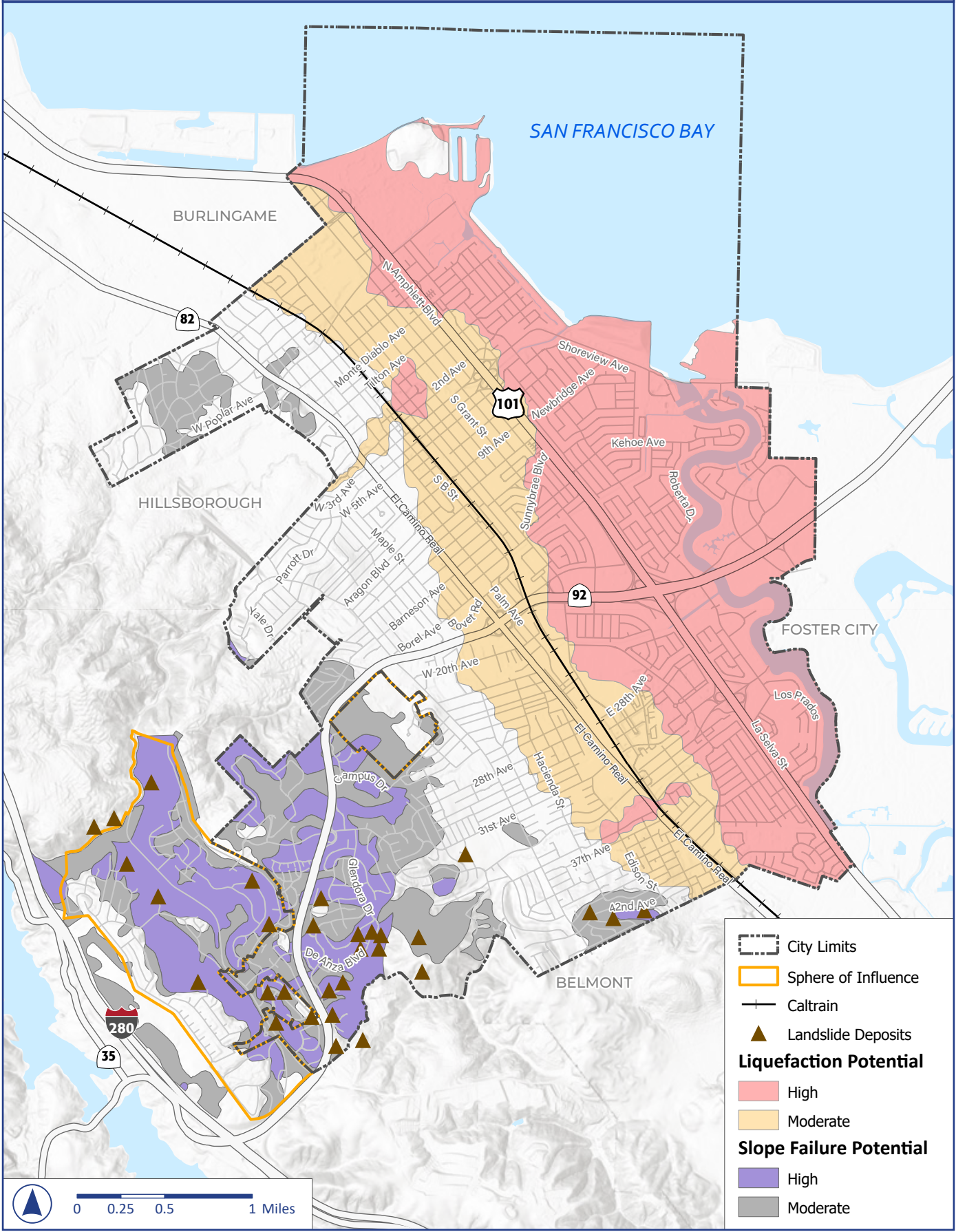
Figure S-3 Shaking Amplification During Earthquakes



Source: California Integrated Seismic Network (CISN), 2021; ESRI, 2022; PlaceWorks, 2023.



Figure S-4 Slope Stability and Liquefaction



Source: City of San Mateo, 2022; ESRI, 2022; PlaceWorks, 2023.

## GOALS, POLICIES, AND ACTIONS

**GOAL S-2** Take steps to protect the community from unreasonable risk to life and property caused by seismic and geologic hazards.

### POLICIES

- Policy S 2.1 Geologic Hazards.** Require site-specific geotechnical and engineering studies, subject to the review and approval of the delegated City Engineer and Building Official, for development proposed on sites identified in Figure S-4 as having moderate or high potential for ground failure. Permit development in areas of potential geologic hazards only where it can be demonstrated that the project will not be endangered by, nor contribute to, the hazardous condition on the site or on adjacent properties.
- Policy S 2.2 Landslides and Erosion Control.** Reduce landslides and erosion in existing and new development through continuing education of design professionals on mitigation strategies. Control measures shall retain natural topographic and physical features of the site, if feasible.
- Policy S 2.3 Vulnerable Buildings.** Encourage modifications to existing unreinforced masonry and soft story buildings, and similar unsafe building conditions to reduce the associated life safety hazards from ground shaking during earthquakes, as shown on Figure S-3. Require voluntary structural modifications to be designed in character with the existing architectural style.
- Policy S 2.4 Liquefaction.** Use the best-available liquefaction mapping data to avoid siting and locating new public facilities and infrastructure in areas susceptible to liquefaction, as shown in Figure S-4.

### ACTIONS

**Action S 2.5 Seismic Shaking Mapping.** Consult with a geology specialist to update the City's geologic hazard mapping, documenting the areas within the city with moderate or high potential for liquefaction or ground failure, as shown in Figure S-4.



**Action S 2.6 Incentives for Seismic Upgrades.** Develop and implement a program to provide financial incentives and education to building owners to support seismic upgrades.

**Action S 2.7 Seismic Stability.** Review the seismic stability of the City's assets and infrastructure, such as City Hall, recreational facilities, roadways, and bridges and identify improvements necessary to enhance each facility's ability to withstand geologic hazards, up to and including a full replacement of the facility.

**Action S 2.8 Unreinforced Masonry Buildings.** Establish and maintain an inventory of unreinforced masonry building in the city and work with the property owners to upgrade the buildings to meet minimum safety and building code requirements.

**Action S 2.9 Soft Story Buildings.** Establish and maintain an inventory of soft story multifamily residential buildings in the city. Educate residents about the vulnerability of soft story construction to severe damage and potential collapse during a significant seismic event, and work with property owners to substantially improve the seismic performance of these residential buildings to meet current structural building design standards.

## FLOOD HAZARDS

Flooding occurs when there is too much water in inland areas to be held in local water detention areas, be carried away by drains or creeks, or soak into the soil. When this happens, water can build up and wash into normally dry areas, causing significant harm to buildings, people, and habitats. Floods can be caused by heavy rainfall or long periods of moderate rainfall, or clogged drains during periods of little rainfall. In rare instances, a break in a dam, levee, water pipe, or water tank can also cause flooding.

FEMA maps areas at risk of inundation from a 100-year flood, which has a 1 percent chance of occurring in any year, and a 500-year flood, where the risk of flooding is 0.2 percent annually, as shown in Figure S-5. These areas are primarily located along creeks, including Laurel Creek and San Mateo Creek, and east of El Camino Real. Climate change may increase the frequency and severity of storms and expand the parts of the city that are considered prone to flooding.

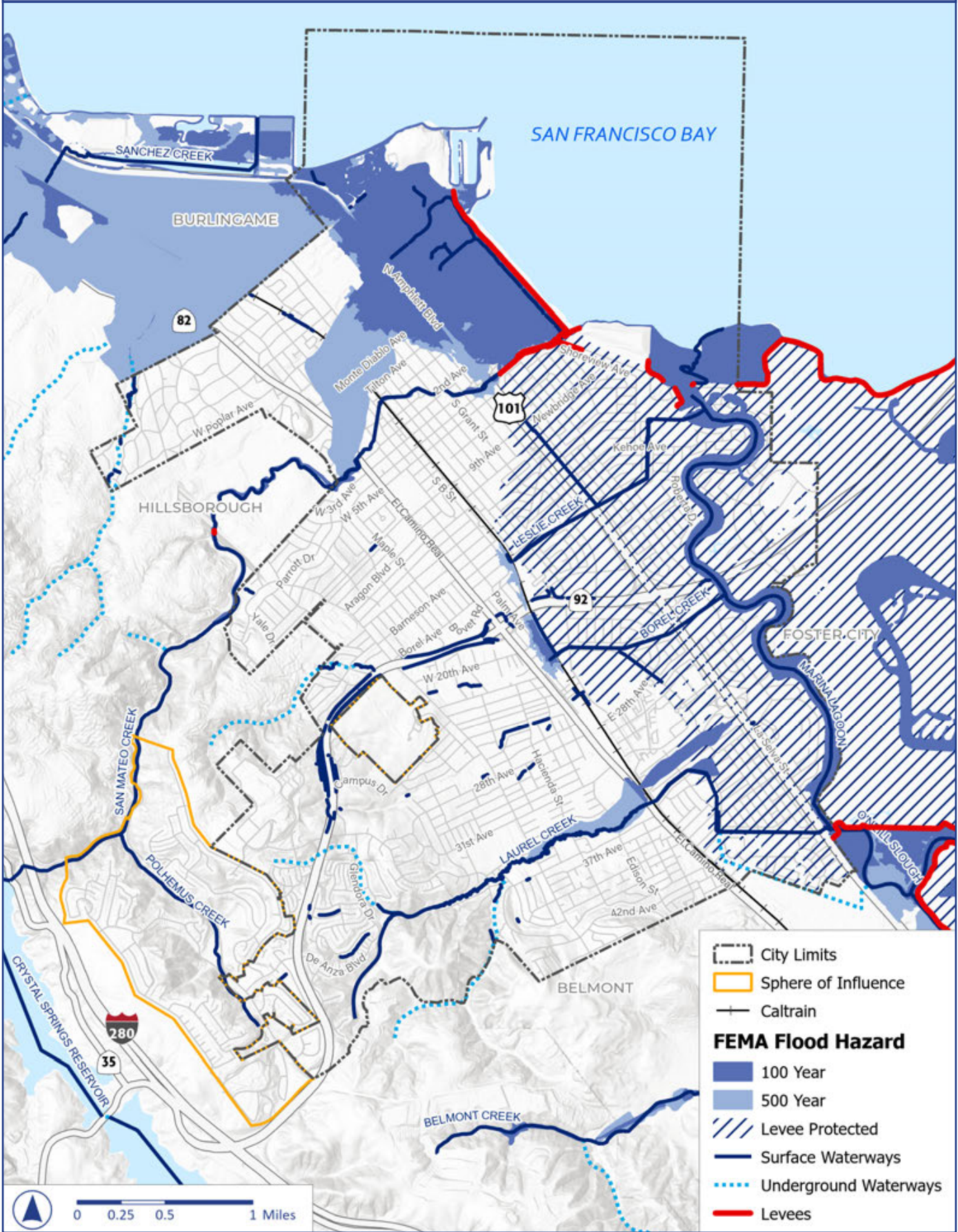
Flooding can also be induced by dam failure, which is caused by structural failure or deficiency associated with intense rainfall, prolonged flooding, earthquakes, landslides, or equipment malfunction. There are two dams of significant concern to San Mateo, as shown in Figure S-6. Failure of Crystal Springs Dam and Laurel Creek Dam would inundate areas along San Mateo Creek and Laurel Creek, and the eastern sections of the city towards the San Francisco Bay. Although dam failures are very rare, they aren't unprecedented. Each dam is required to have a comprehensive emergency action plan approved by the California Department of Water Resources, Division of Safety of Dams.

Tsunamis, caused by offshore earthquakes, can severely damage property, result in loss of lives, disrupt emergency services, and obstruct roads through intense flooding. Figure S-7 illustrates the areas that may be subject to tsunami inundation in San Mateo, which include shoreline areas along the San Francisco Bay. As shown in Figure S-7, although much of the tsunami flooding would occur in the northeast portion of the city, the area of tsunami inundation along the southeast corner of the city originates from the Belmont Slough and would stop at the levee, where the Bay Trail is located and the lagoon starts. Earthquakes with magnitudes below 6.5 are very unlikely to trigger a tsunami. See also the Geologic and Seismic Hazards section of this element for more information on earthquake hazards.

As discussed in the Public Services and Facilities Element, San Mateo has levees that protect the city from flooding from creeks and the San Francisco Bay. Non-federal levees are along the shoreline of Seal Point Park, and over 1,300 feet of levees have been upgraded along the San Mateo and Burlingame border. The San Mateo County Flood and Sea Level Rise Resiliency District, or OneShoreline, was created in 2020 to facilitate multijurisdictional flood and sea level rise resiliency projects in San Mateo County. Earthquakes or overtopping due to major storms can cause levees to fail, flooding the shoreline areas of the city.



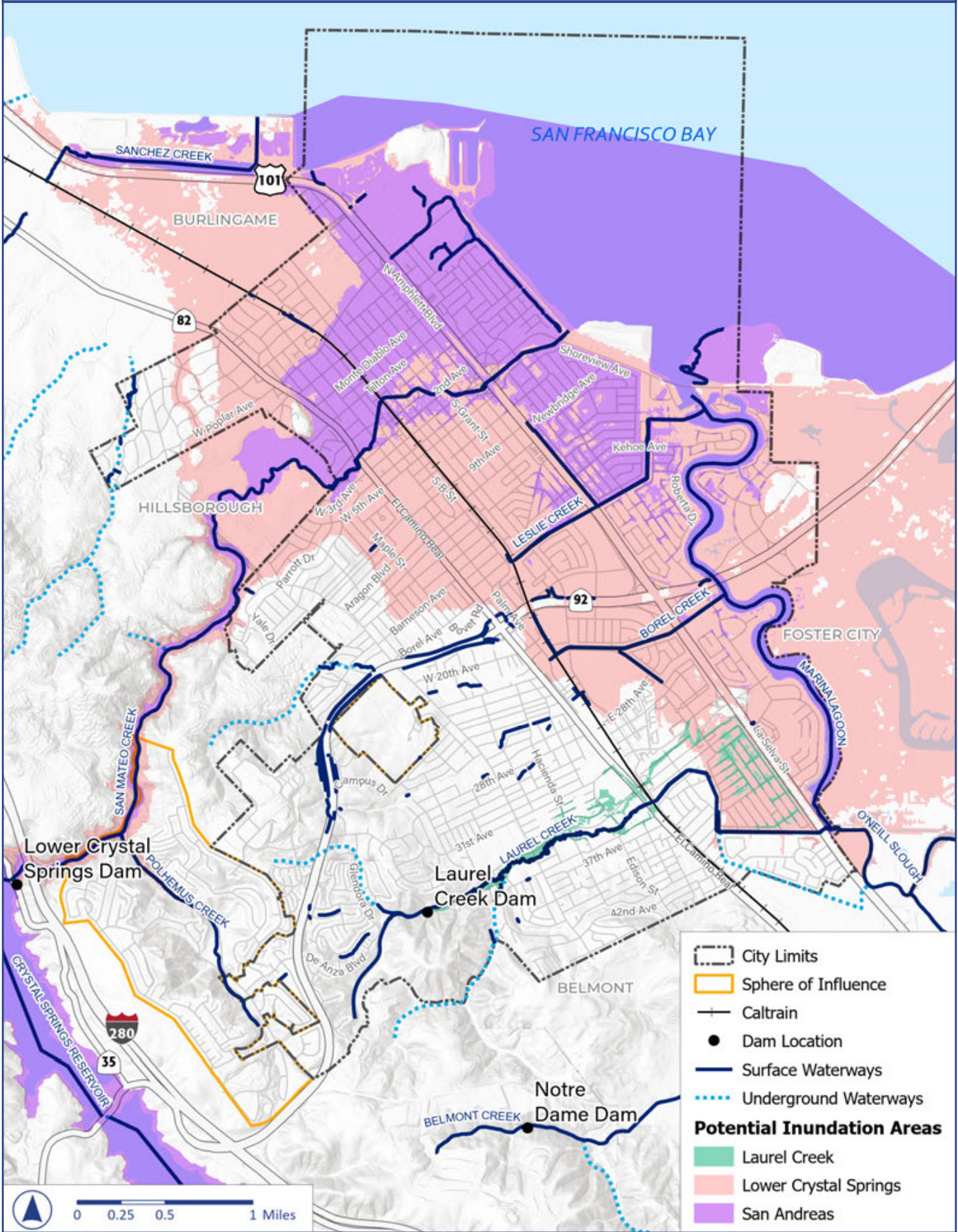
Figure S-5 Potential Flood Hazards



Source: CalDWR, 2022; FEMA, 2022; ESRI, 2022; PlaceWorks, 2023.



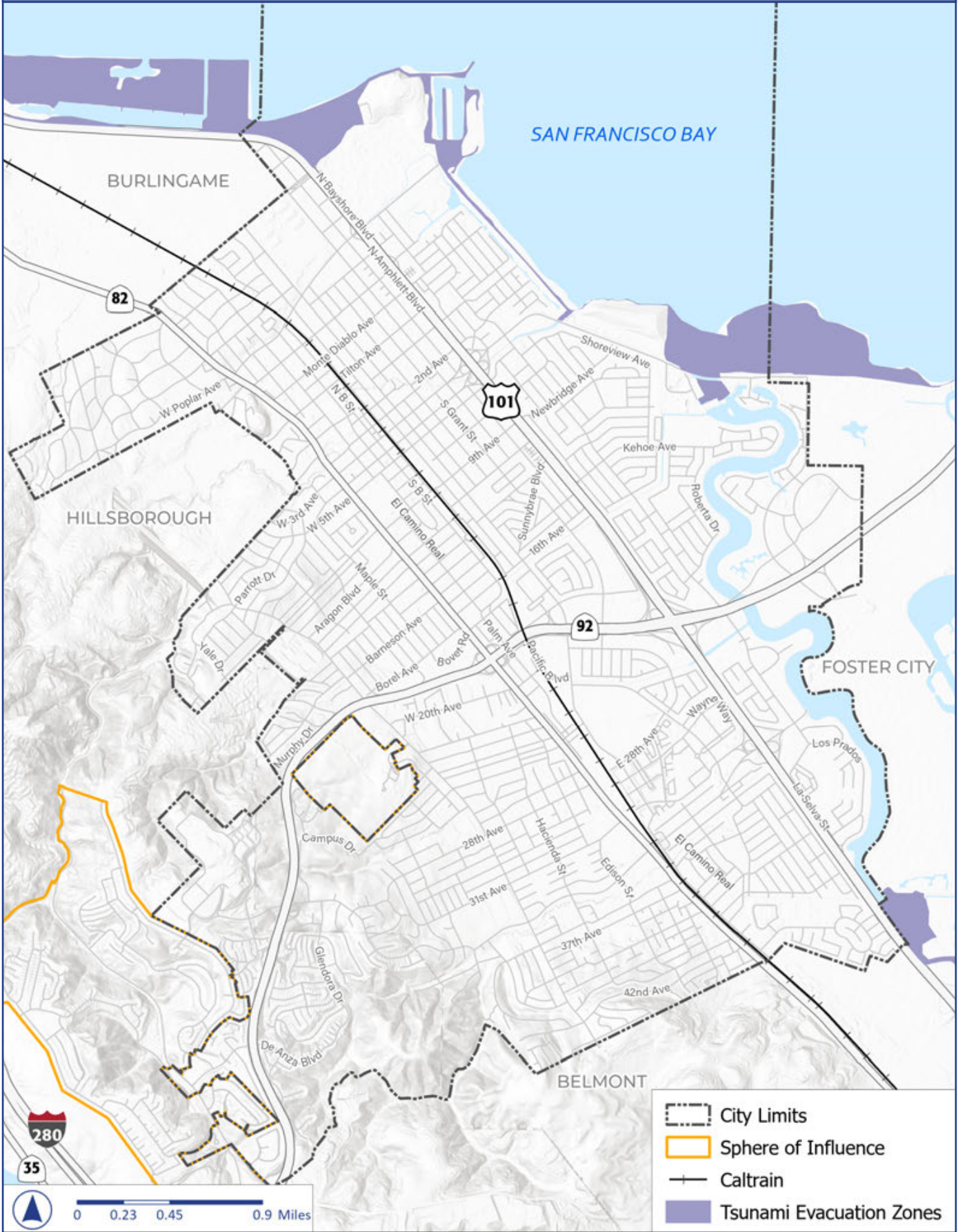
Figure S-6 Potential Flood Hazards – Dam and Levee Failure



Source: CalDWR, 2022; ESRI, 2022; PlaceWorks, 2023.



Figure S-7 Tsunami Hazard Zones



Source: CGS, 2022; ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.





## GOALS, POLICIES, AND ACTIONS

**GOAL S-3** Protect the community from unreasonable risk to life and property caused by flood hazards.

### POLICY

**Policy S 3.1 Development within Floodplains.** Protect new development and substantial retrofits within a floodplain by requiring the lowest finish floor elevation to be above the applicable floodwater elevation or by incorporating other flood-proofing measures consistent with Federal Emergency Management Agency (FEMA) regulations, OneShoreline guidance, the City's Floodplain Management Ordinance, and other City policy documents.

### ACTIONS

**Action S 3.2 Floodplain Ordinance Update.** Update the Floodplain Management Ordinance, including to align with FEMA and OneShoreline recommendations and to update construction cost value information.

**Action S 3.3 Flood Risk Mapping Data.** Regularly update mapping data pertaining to the 100-year and 500-year floodplains, dams, and levee failure as information becomes available.

**Action S 3.4 Community Rating System.** Undertake efforts that increase the City's rating under FEMA's Community Rating System, such as expanding and improving Geographic Information System (GIS) mapping capacity, developing a flood early warning system, and creating a Flood Emergency Action Plan.

**Action S 3.5 Early Flood Warning.** Collaborate with OneShoreline to provide early flood warning for flood-prone areas of the city through OneShoreline's stream monitoring station and notification system.

## SEA LEVEL RISE

As global temperatures increase, glaciers and other land ice near the north and south poles melt and sea levels rise. Higher temperatures also cause water to expand in oceans, further contributing to sea level rise. Rising seas increase the risk of flooding, storm surge inundation, erosion and shoreline retreat, and wetland loss. According to OneShoreline, San Mateo County as a whole is the most vulnerable county in California to sea level rise because of its extensive coastline and Bay shoreline and the number of people, value of properties, and critical assets in sea level rise-prone areas. Along the shoreline of the city, different scenarios project that sea levels will rise between 1.1 and 2.7 feet by 2050, with levels above 2 feet likely, and by 3.4 to 10.2 feet by 2100. However, it is possible that sea levels could rise faster than these projections. Figures S-8 and S-9 display the expected sea level rise in San Mateo in 2050 (2 feet) and 2100 (7 feet) based on the Ocean Protection Council's 2018 Updated California Sea Level Rise Guidance, featuring models from the Adapting to Rising Tides program of the San Francisco Bay Conservation and Development Commission (BCDC). These figures do not reflect the improvements currently underway for the Foster City levee system.

Rising sea levels can also cause the shoreline to flood more frequently and severely during storms or king tide events. King tides are abnormally high, predictable astronomical tides that occur about twice per year, with the highest tides occurring when the earth, moon, and sun are aligned. Because sea level rise will cause ocean levels to be higher during normal conditions, shoreline floods can reach further onto land. For example, a storm that has a one in five chance of occurring in a given year (known as a five-year storm) can create a temporary increase in sea levels of approximately two feet. The goals, policies, and actions in this section call for planning for a medium- to high-risk aversion scenario in 2100. This scenario uses a 1 in 200 chance for sea level rise projections, providing a precautionary projection that can be used for less adaptive (less able to make changes that reduce harm in response to hazards), more vulnerable developments or populations that will experience moderate to high consequences if actions are not taken to address sea level rise in these areas. Figure S-10 shows shoreline flooding on top of sea level rise in the event of a five-year storm for 2050.

Rising sea levels also threaten a significant portion of San Mateo's housing, commercial buildings, essential infrastructure, and economic drivers, as low-lying land near the shoreline could be subject to more frequent flooding. Affected essential infrastructure includes US Highway 101, State Route (SR-) 92, and the Caltrain station and associated railroad infrastructure. Meanwhile, rising tides may increase groundwater levels, inundating contaminated soils. Given that some contaminated sites in San Mateo sit near the shoreline, rising groundwater may cause contaminated soils to leach into new, different areas.

Natural ecosystems in the bay will be disrupted by the higher tide levels and intrusion of saltwater into freshwater creek systems and the Marina Lagoon. Historically, marshlands along the shoreline have adapted to changes in sea level by building up sediment, increasing the height of the marsh to keep pace with the tide levels of the San Francisco Bay, and moving inland. However, eastern San Mateo is lined with a three-mile levee system that has very little marsh habitat, and any habitat migration is expected to be outpaced by sea level rise. Creative integration of nature-based solutions to combine natural buffers with San Mateo's extensive existing levee system to mitigate flooding risks could be an opportunity to re-establish ecological communities and enhance natural areas, such as the creeks throughout the city and the Marina Lagoon.



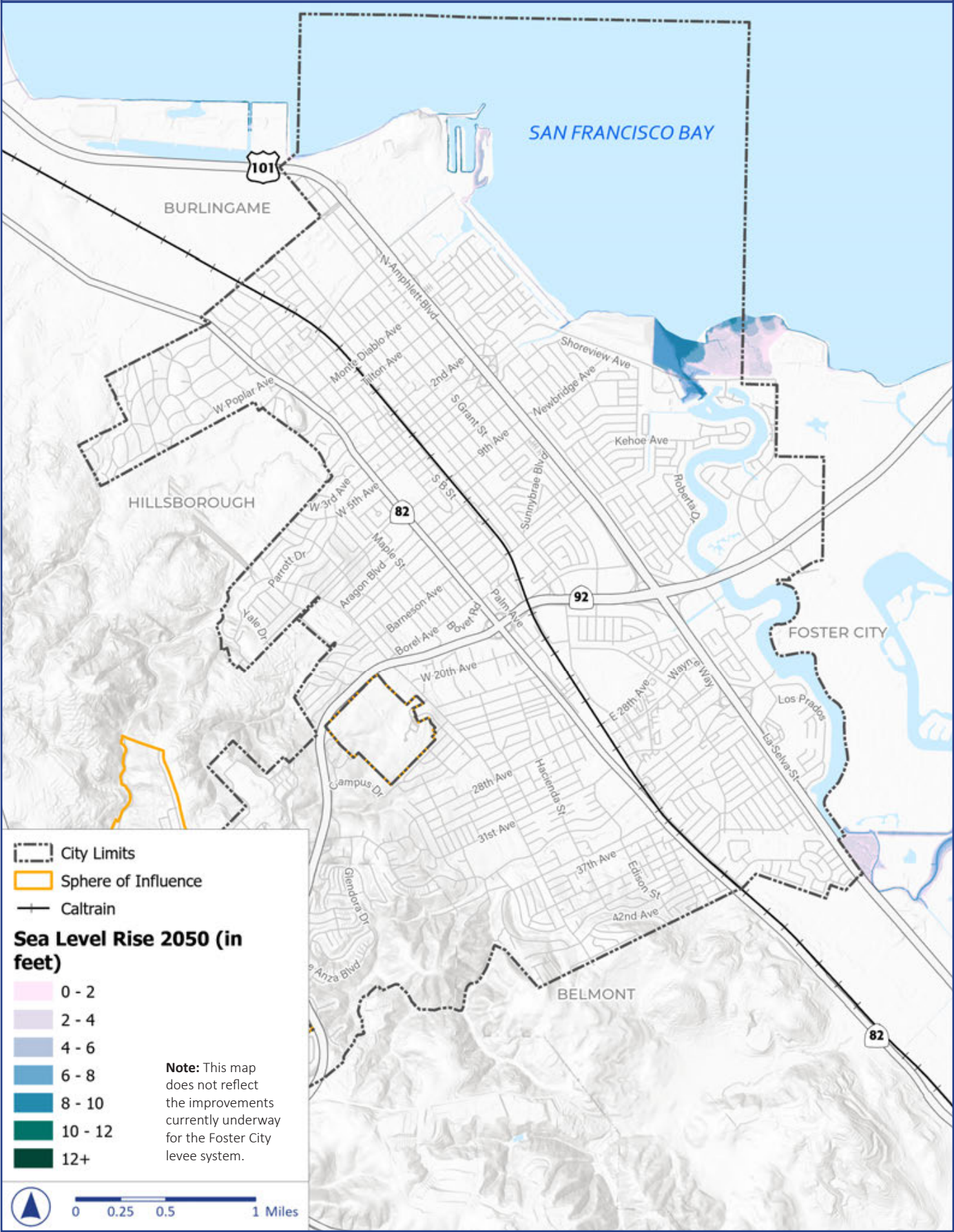
In 2023, the City completed improvements in the North Shoreview neighborhood, which is south of Coyote Point, roughly bound by San Mateo Creek to the south, U.S. Highway 101 to the west, the Poplar Creek Golf Course to the north, and San Francisco Bay to the east. Ground elevations in the neighborhood range from below sea level to about 10 feet above sea level, so the area is susceptible to flooding from San Francisco Bay and stormwater runoff that collects behind the levees protecting the neighborhood from bay water intrusion. Figure S-11 shows a map of the neighborhood and the various structures and facilities that provide protection against these flood risks. The City upgraded the Coyote Point and Poplar Avenue pump stations and made improvements to a section of the Bayfront Levee. With the added protection, approximately 1,600 properties in North Shoreview will be removed from the 100-year flood zone once approved by FEMA. The levee improvements will add 3.9 feet above the predicted base flood elevation to account for sea level rise.

Neighboring Foster City is also in the process of constructing improvements to their levee system, which interconnects with the City of San Mateo's system. Their improvements will provide protection from the 100-year flood and an additional 3 feet above the predicted base flood elevation to account for sea level rise.

The City of San Mateo will continue working with regional, State, and federal partners to proactively address the potential impacts of sea level rise. The City regularly participates in data gathering and mapping, collaborates with OneShoreline, manages a new assessment district in North Shoreview to fund necessary flood protection improvements, and completes infrastructure projects to provide flood protection. The City is also engaged through the BayCAN collaborative, a Bay Area-wide collaborative network of local governments and organizations focused on responding effectively and equitably to the impacts of climate change.



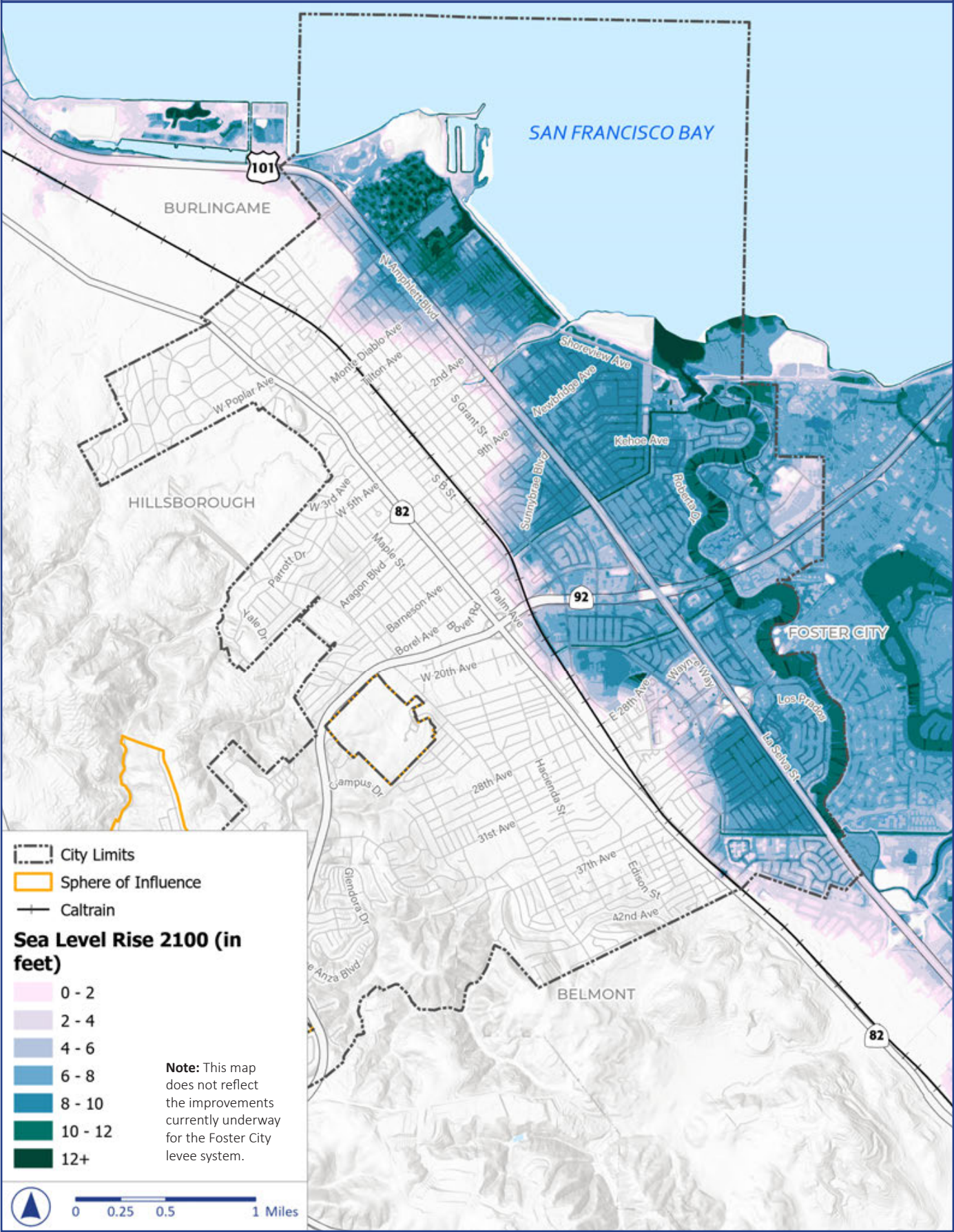
Figure S-8 2050 Sea Level Rise



Source: ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.



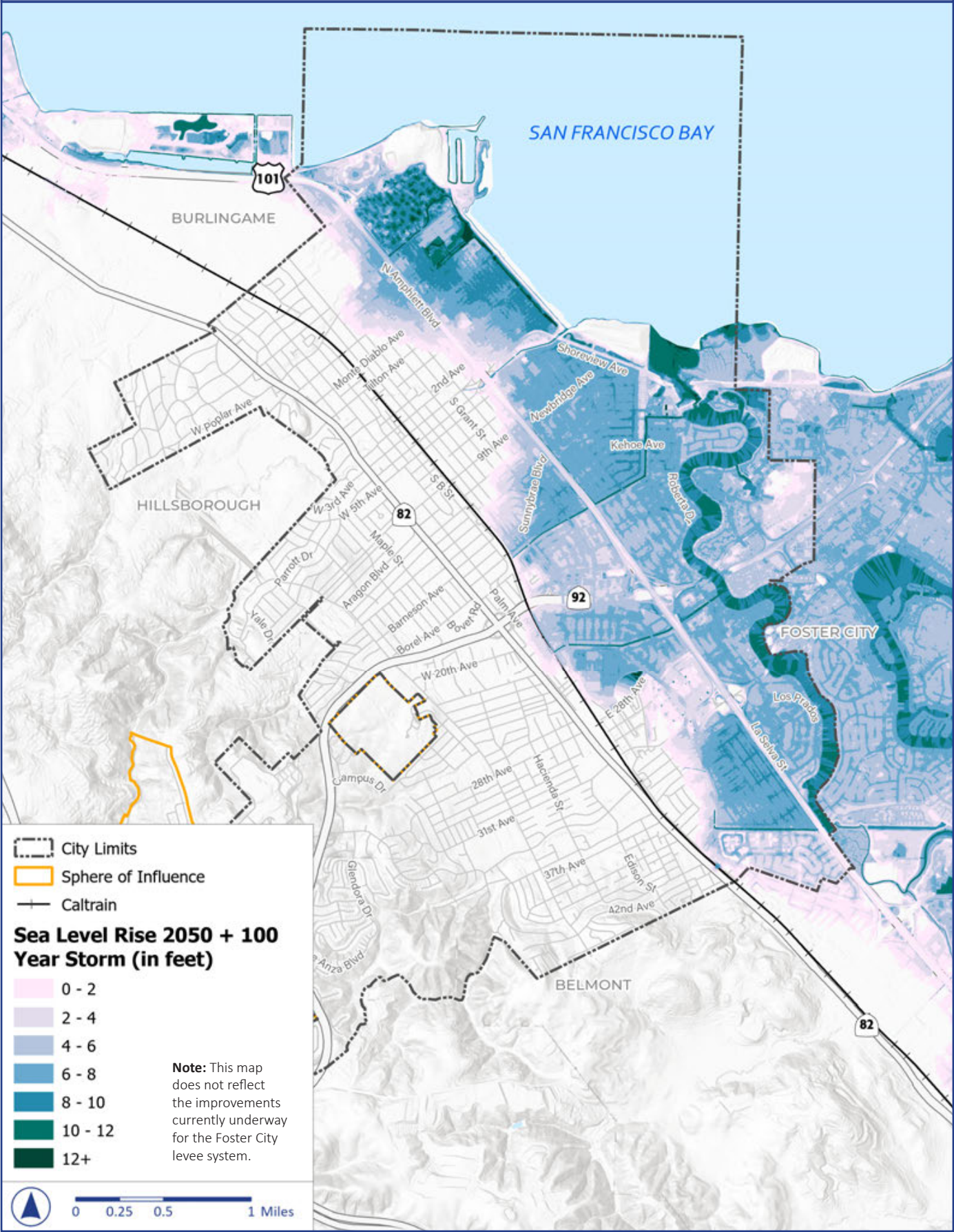
Figure S-9 2100 Sea Level Rise



Source: ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.



Figure S-10 2050 Sea Level Rise Plus 100-Year Storm



Source: ESRI, 2022; PlaceWorks, 2023.  
Note: This map is included for informational purposes and is not adopted as part of this General Plan.



**Figure S-11 North Shoreview Flood Protection Improvements**



Note: This map is included for informational purposes and is not adopted as part of this General Plan.

## GOALS, POLICIES, AND ACTIONS

**GOAL S-4** Develop regionally coordinated sea level rise adaptation measures and programs.

### POLICIES

**Policy S 4.1 Sea Level Rise Planning.** Integrate sea level rise planning into all relevant City processes, including General Plan amendments, Specific Plans, zoning ordinance updates, capital projects, and review and approval of new development and substantial retrofits.

**Policy S 4.2 Sea Level Rise and Groundwater Rise Protection.** Ensure that new development, substantial retrofits, critical facilities, City-owned buildings, and existing and future flood control infrastructure are planned and designed to accommodate climate change hazards, including increases in flooding, sea level rise, and rising groundwater, based on the best available science.



**Policy S 4.3 Natural Infrastructure.** Consider the use of nature-based solutions and natural infrastructure in sea level rise adaptation strategies.

**Policy S 4.4 OneShoreline Coordination.** Coordinate with OneShoreline to develop and implement coordinated approaches to sea level rise with other San Mateo County jurisdictions.

## ACTIONS

**Action S 4.5 Climate Change Adaptation Plan.** Assess sea level rise projections, consistent with OneShoreline recommendations, identify the extent of areas vulnerable to sea level rise in the city, and develop a Climate Change Adaptation Plan that sets a comprehensive strategy and includes planning and design standards for climate risk protection. Use this plan to evaluate development applications to ensure projects are protected from sea level rise hazards over the life of the project and to assess public infrastructure needs for adequate protection.

**Action S 4.6 Sea Level Rise Monitoring.** Review and use the best-available sea level rise science and projections and regularly identify natural resources, development, infrastructure, and communities that are vulnerable to sea level rise impacts, including impacts from rising groundwater. Use this information to continue to develop or adjust planning and adaptation strategies.

**Action S 4.7 Rising Groundwater Coordination.** Coordinate with OneShoreline, local jurisdictions, and regional and State agencies to study and enforce requirements related to rising groundwater levels caused by sea level rise.



**Action S 4.8 Natural Infrastructure.** Use or restore natural features and ecosystem processes where feasible and appropriate as a preferred approach to the placement of hard shoreline protection when implementing sea level rise adaptation strategies.

**Action S 4.9 Sea Level Overlay Zone.** Study the feasibility of establishing a sea level rise overlay zone that would allow for the creation of adaptation policies, rules, or construction codes unique to this area, and consistent with OneShoreline guidance, to require properties be made resilient to sea level rise.

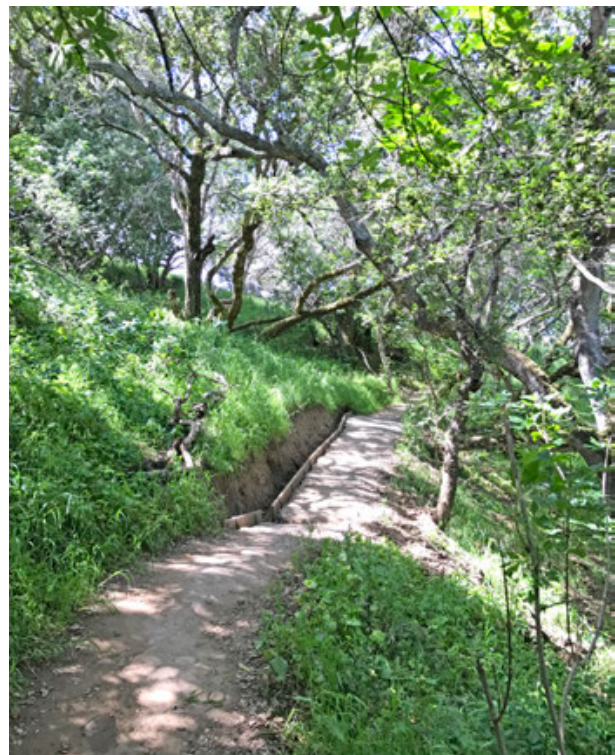
**Action S 4.10 Sea Level Rise Funding.** Study options for establishing dedicated General Fund dollars to support efforts to address sea level rise, including sufficiently supporting OneShoreline.

**Action S 4.11 New Development.** Explore creation of a new fee for new development along the bay shoreline to fund sea level rise protection measures and adaptation strategies.

## WILDFIRE HAZARDS

Wildfires are a regular feature of the landscape in much of California and can be sparked by lightning, malfunctioning equipment, vehicle crashes, or other causes. High winds, such as the Diablo Winds, can cause fires to spread rapidly and erratically, increasing the difficulty of containment and possibility of burning into developed areas. In addition to direct fire impacts on people and property, wildfires remove stabilizing vegetation from hillsides, increasing the likelihood of future landslides. When wildfires burn at very high temperatures, soils can become hydrophobic, preventing the ground from absorbing stormwater and causing flooding downslope. Residents can also be harmed by smoke from wildfires in the region or across northern California. Particulate matter from smoke can cause respiratory illnesses, especially for those who spend a lot of time outdoors during smoky conditions.

The California Department of Forestry and Fire Protection (CAL FIRE) designates lands into responsibility areas based on who is financially responsible for fire-protection services. Local Responsibility Areas (LRAs) include areas where City fire departments or local fire protection districts are charged with fire protection. State Responsibility Areas (SRAs) include unincorporated areas and State lands where the State has financial responsibility for wildfire protection. San Mateo is within an LRA, and the San Mateo Consolidated Fire Department provides fire prevention and protection services for the area. There are no locations in San Mateo that currently lack access to fire-protection services.





Within the responsibility areas, CAL FIRE designates (with City approval) lands as Moderate, High, or Very High Fire Hazard Severity Zones. As shown in Figure S-12, Very High Fire Hazard Severity Zones are in western San Mateo between the City Limits and SR-92, as well as near Yale Drive and St. Johns Cemetery. Current mapping does not yet designate Moderate or High Fire Hazard Severity Zones in the City Limits. Users should consult the most recent available mapping from CAL FIRE's Fire and Resource Assessment Program (FRAP).<sup>1</sup> Future updates to this Safety Element will include new fire mapping data as it becomes available.

Wildfires may start in wildland areas, natural areas in the unincorporated county, but they can easily spread to developed areas in the city between urban development and wildlands. This area is called the Wildland-Urban Interface (WUI), as shown in Figure S-13. The WUI is made up of two distinct zones. The interface zone contains dense housing or other structures next to vegetation but has little wildland vegetation that can burn in a wildfire. The wildland zones have higher concentrations of wildland vegetation with fewer structures and may have limited access and/or steeper terrain that makes controlling wildfires more difficult. As shown in Figure S-13, the wildland zones are in and near Laurelwood Park and in open space areas near the Peninsula Golf & Country Club. The interface zones border the park and open space areas and include residential neighborhoods, roadways, and other infrastructure throughout west and southwestern parts of San Mateo.

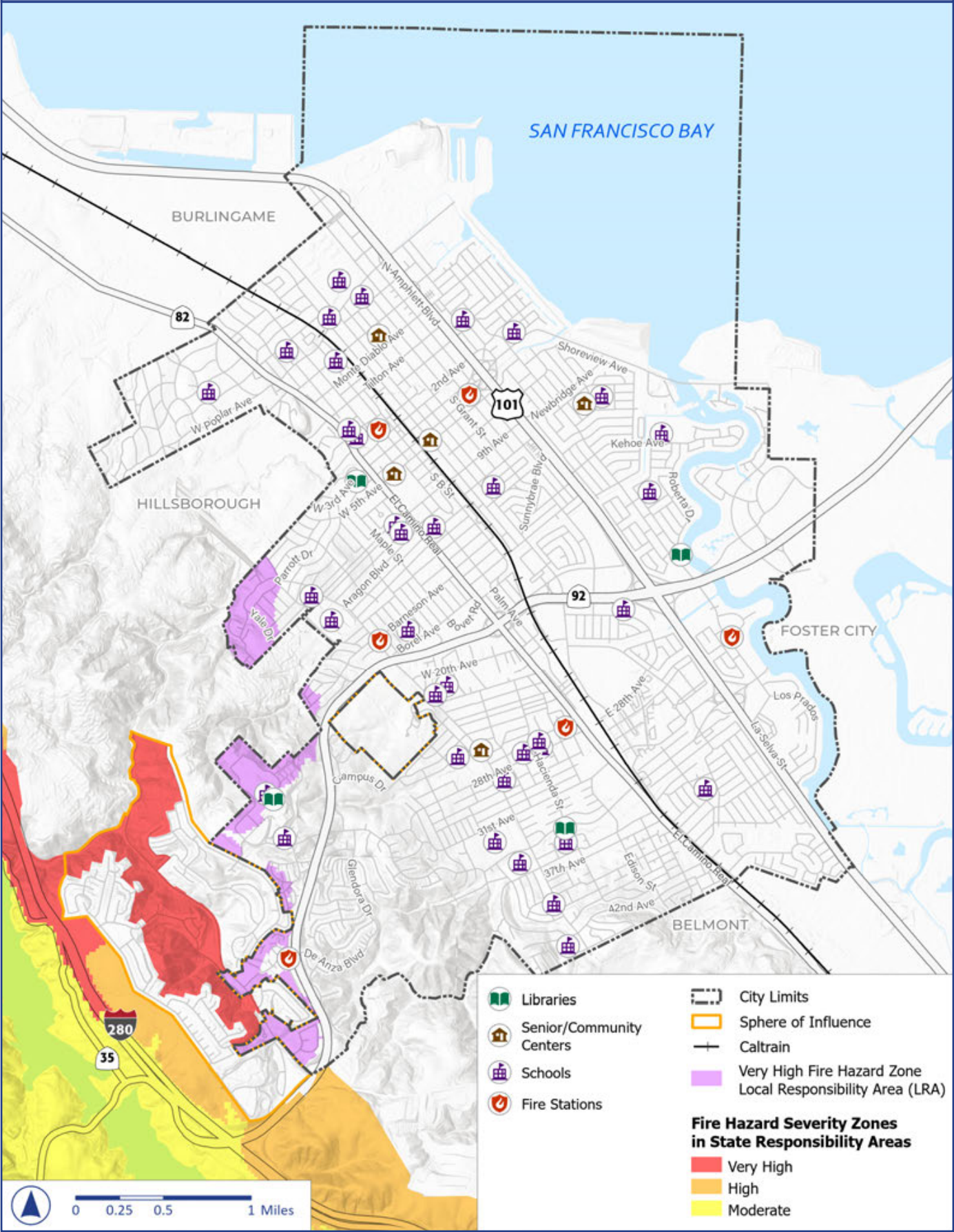
Within the Very High Fire Hazard Severity Zones and WUI zones, there are existing homes, businesses, and public land uses, as well as associated infrastructure like major roadways (e.g., SR-92 and Interstate 280), electrical transmission infrastructure, water and wastewater distribution systems, and communication facilities. Much of this development occurred prior to wildfire hazard mapping; the policies and actions in this element limit future residential development in Very High Fire Hazard Severity Zones and aim to protect existing buildings and infrastructure. Meanwhile, State law requires that homeowners in the WUI zones create and maintain defensible space around homes and other structures, keep roofs clear of flammable material, and use spark arresters on chimneys. Figure S-14 shows the land use designations within Very High Fire Hazard Severity Zones for the Strive San Mateo General Plan 2040.

Although no fires have burned in close proximity to San Mateo since CAL FIRE has kept records (1878), several fires have burned in the unincorporated areas of San Mateo County. Recently, the 2020 CZU Lightning Complex Fire burned over 86,000 acres in southern San Mateo County. In 2022, a wildfire burned in the Emerald Hills area of Redwood City, to the south of San Mateo, which could have burned into the city under different conditions. Areas that have previously burned, regardless of their location within or outside of a Fire Hazard Severity Zone, are likely to burn again. Due to climate change, fire activity is projected to increase where development expands in the WUI zones and in areas of high winds.

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<sup>1</sup> Available at <https://frap.fire.ca.gov>.

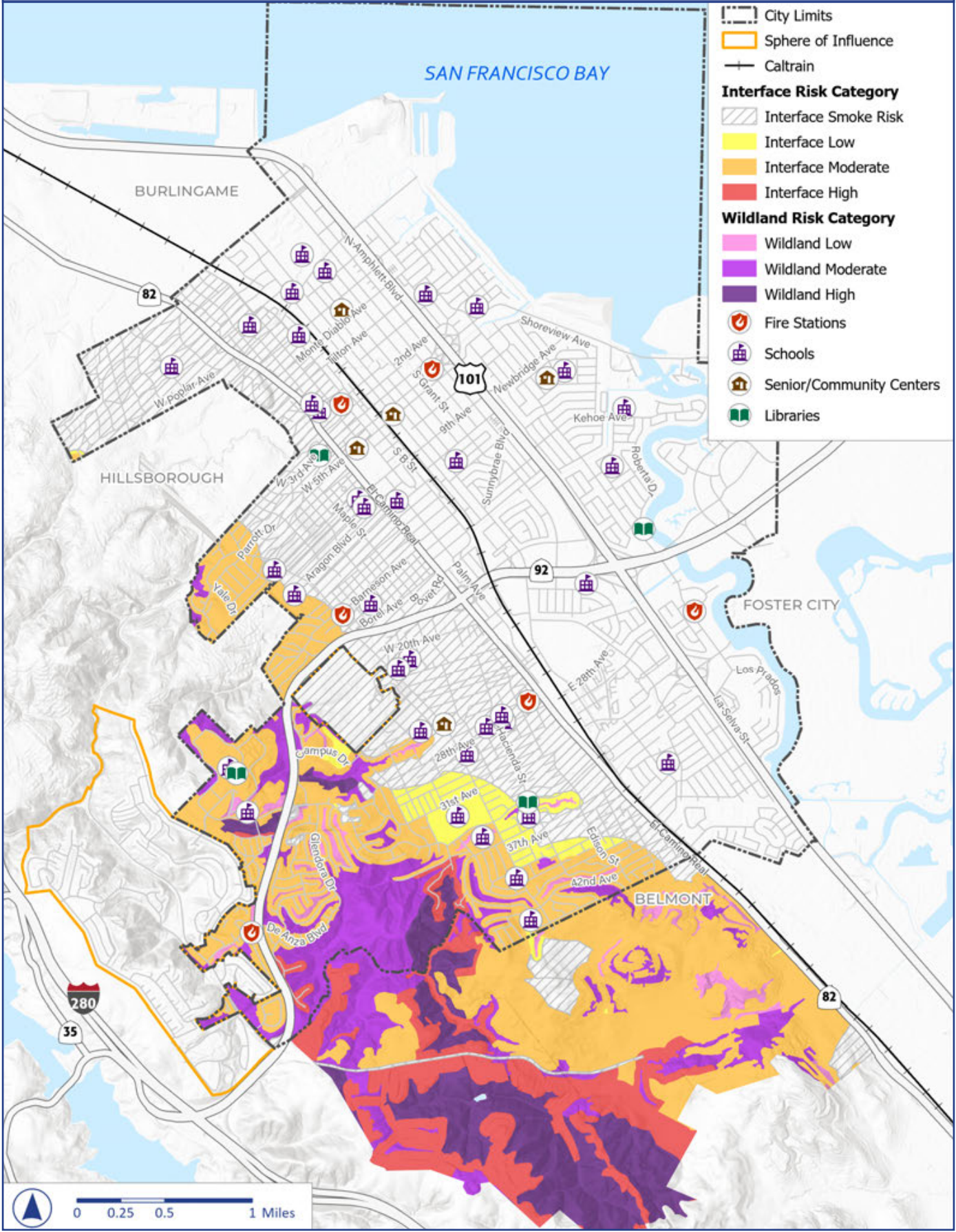
Figure S-12 Wildfire Hazard Zones



Source: CalFire, 2022; ESRI, 2022; PlaceWorks, 2023.  
Note: This map is a draft and will be updated once CalFire publishes the new Wild Hazard Zones.



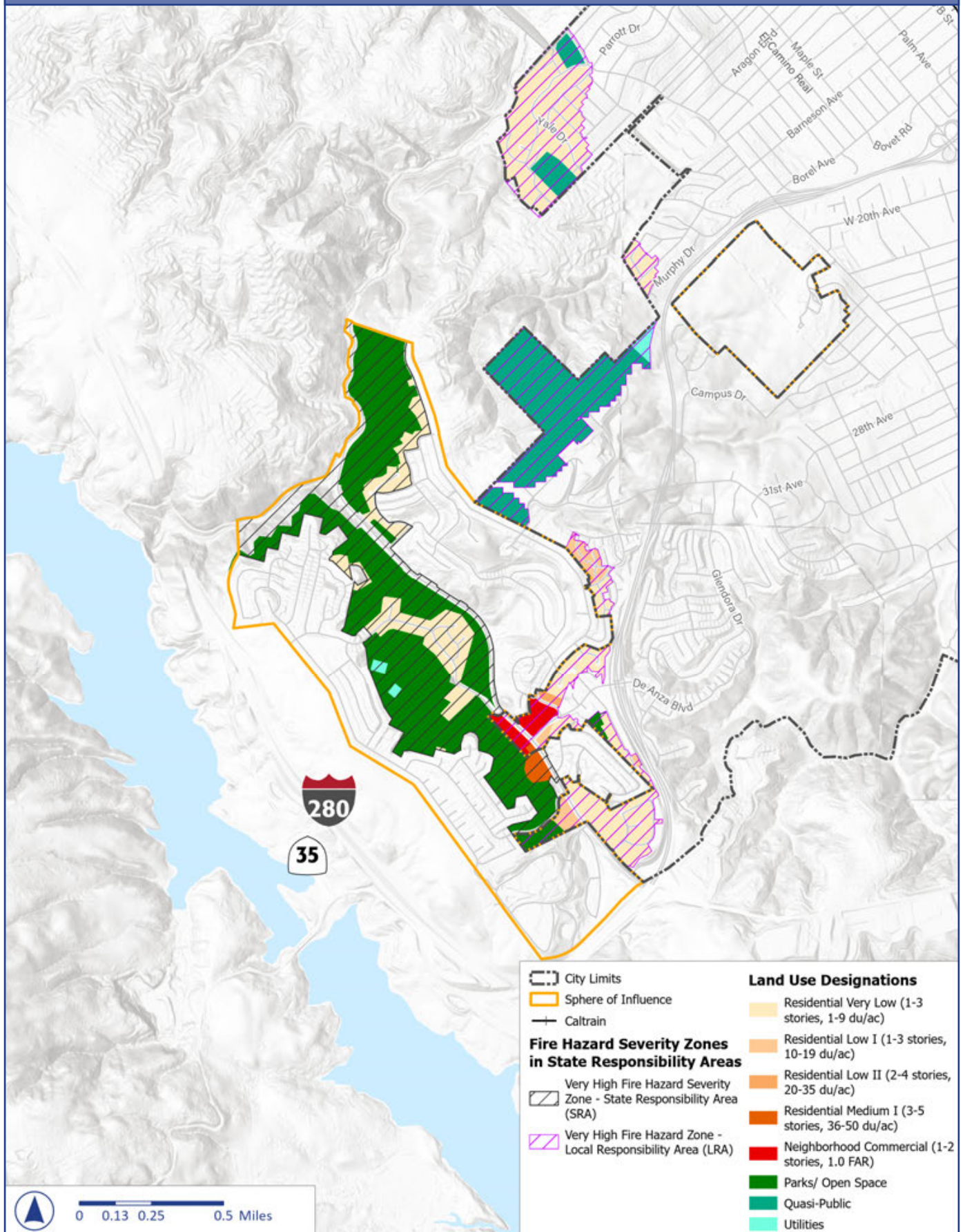
Figure S-13 Wildland-Urban Interface



Source: City of San Mateo, 2022; ESRI, 2022; PlaceWorks, 2023.



Figure S-14 Land Uses in Very High Fire Hazard Severity Zones



Source: City of San Mateo, 2022; ESRI, 2022; PlaceWorks, 2023.

Note: This map is a draft and will be updated once CalFire publishes the new Wild Hazard Zones.

## GOALS, POLICIES, AND ACTIONS

### GOAL S-5 Maintain adequate fire and life safety protection from wildland fires.

#### POLICIES

- Policy S 5.1 Very High Fire Hazard Severity Zones.** Avoid new residential development in Very High Fire Hazard Severity Zones, as shown on Figure S-14, or the most current data available from CAL FIRE. Redevelopment or reconstruction of existing structures is allowed. Coordinate with San Mateo Consolidated Fire Department (SMC Fire) to ensure new construction of buildings or infrastructure within a Fire Hazard Severity Zone or Wildland-Urban Interface (WUI), as shown on Figures S-12 and S-13 or the most current data available from CAL FIRE, are in full compliance with applicable State and local regulations and meet the Very High Fire Hazard Severity Zone Fire Safe Regulations for road ingress and egress, fire equipment access, and adequate water supply.
- Policy S 5.2 Reconstruction of Development.** Require reconstruction projects or significant retrofits in a Fire Hazard Severity Zone and the Wildland-Urban Interface, as shown on Figures S-12 and S-13 or the most current data available from CAL FIRE, to be consistent with the California Building Standards Code, California Fire Code, and Very High Fire Hazard Severity Zone Fire Safe Regulations.
- Policy S 5.3 Wildland Fire Protection.** Require all development in and adjacent to designated Fire Hazard Severity Zone and Wildland-Urban Interface to prepare a fire protection plan for review and approval by SMC Fire prior to issuance of building permits and to provide access and defensible space in accordance with California codes and local ordinances.
- Policy S 5.4 Hillside Vegetation Stability.** Stabilize, and as feasible re-vegetate, burned slopes following a wildfire event to reduce landslide and debris flow risk.
- Policy S 5.5 Fire Risk Mapping.** Coordinate with SMC Fire to consistently update any mapping data showing fire extent in San Mateo using CAL FIRE data and local wildland fire risk maps indicating the locations and extents of Fire Hazard Severity Zones, Local Responsibility Areas, and the Wildland-Urban Interface. Use this mapping data to inform decisions about existing risk and future land uses throughout the city and share these maps widely on the City's website, published handouts and flyers, and at in-person and virtual education events.
- Policy S 5.6 Firefighting Infrastructure.** Coordinate with SMC Fire to ensure adequate firefighting infrastructure, including road and building clearance for firefighting vehicles, and clear and legible street signage throughout the community.
- Policy S 5.7 Peakload Water Supply.** Ensure that the California Water Service Company and the Estero Municipal Improvement District provide and maintain a water supply and distribution system that provides an adequate static pressure to deliver the minimum fire hydrant flow to all areas of the city, except where a lesser flow is acceptable, as determined by SMC Fire.

- Policy S 5.8 Facilities Planning.** Place all new public facilities or relocate existing public facilities outside of identified fire hazard risk areas as feasible. Appropriately retrofit public facilities to mitigate fire risk.
- Policy S 5.9 Land Use Management for Fire Risks.** Maintain all City-owned public lands and work with private landowners to reduce fuel loads, establish appropriately placed fire breaks/defensible space, require long-term maintenance of fire hazard reduction projects, and educate all property owners in the city on proper landscape maintenance and firescaping standards to reduce the risk of fire hazards.
- Policy S 5.10 Wildland Fire Vulnerability.** Consider all improvements at Sugarloaf Mountain and Laurelwood Park in the context of the area's high fire risk and include wildfire mitigation components in projects when feasible.
- Policy S 5.11 Fire-Safe Roads.** Coordinate with SMC Fire to evaluate new development or significant retrofits that have access on roadways that do not meet fire-safe road and vegetation standards within the Wildfire-Urban Interface and/or Very High Fire Hazard Severity Zone and ensure that road standards and vegetation management occurs and is maintained.
- Policy S 5.12 Secondary Access.** Explore secondary means of ingress and egress in areas with evacuation constraints, as shown in Figure S-2, Evacuation-Constrained Areas, for existing subdivisions or developments of 30 units or more within a Very High Fire Hazard Severity Zone.
- Policy S 5.13 Emergency Access.** Require that roads, driveways, and other clearances around structures are located and designed to ensure emergency access.
- Policy S 5.14 Emergency Services.** Work with SMC Fire to provide fire prevention, protection, and emergency preparedness services that adequately protect residents, employees, visitors, and structures from fire and fire-related emergencies.

## ACTIONS



- Action S 5.15 Tree Maintenance.** Collaborate with SMC Fire to maintain City-owned trees in a manner that does not contribute to fire danger, in accordance with current best management practices (BMPs).



- Action S 5.16 Fire-Safe Education.** Work with SMC Fire and seek funding to develop a fire-safe education program that provides information and awareness to community members about defensive space, fire-resistant landscaping and construction, evacuation preparation, and other wildfire education topics.

- Action S 5.17 Fire Hazard History.** Include a historical record of any significant fire events that have occurred in San Mateo or the surrounding area in all updates to the City's Safety Element.

- Action S 5.18 Vegetation Management on City-Owned Land.** Coordinate with SMC Fire to continue conducting and providing long-term maintenance of vegetation management projects in City-owned parks and open spaces to prevent wildfire ignition and spread.



**Action S 5.19 Reevaluation of Development Standards.** Reevaluate development standards for wildfire risk areas following major wildfire events and apply updated standards as needed to maintain high levels of wildfire protection.

**Action S 5.20 Vegetation Management.** Coordinate with the SMC Fire and the FIRE SAFE San Mateo County to obtain funding for and conduct vegetation and fuel modification or management.

## HAZARDOUS MATERIALS

Much of the economic success of the Bay Area is based on research and manufacturing, the byproducts of which include substances that may be harmful to people and the surrounding environment. Hazardous waste ranges from familiar substances, such as waste oil and cleaning solvents, to highly toxic industrial compounds, and include toxic metals, gases, flammable and explosive liquids and solids, corrosive materials, radioactive materials, and infectious biological waste. They can be released through human error, malfunctioning or broken equipment, or as an indirect consequence of other emergencies (e.g., if an earthquake damages a hazardous material storage tank). Hazardous materials can also be released accidentally during transportation, as a consequence of vehicle accidents.

Most of the waste generators in San Mateo are small-quantity generators – small businesses and households that generate less than 12 tons per year. Numerous industrial and commercial operations, both past and present, have manufactured, handled, stored, and disposed of hazardous materials. Hazardous material sites include manufacturing operations, facilities with leaking underground storage tanks (LUSTs), and generators of hazardous waste. In the twenty-first century, life science buildings are replacing industrial businesses as users of hazardous materials and producers of hazardous waste.

The San Mateo County Hazardous Waste Management Plan, implemented by San Mateo County Environmental Health Service, the designated Certified Unified Program Agency for the county, has designated 15 areas in San Mateo that are zoned for either commercial or industrial uses as suitable for waste treatment, recycling, storage, and transfer facilities. The sites designated for these facilities are in manufacturing districts adjacent to the Union Pacific rail corridor. Sites designated for storage and transfer facilities are in service commercial and transit-oriented development zoning districts adjacent to the rail corridor, west of US Highway 101 on Amphlett Boulevard, and in Coyote Point Park.

Hazardous materials are primarily transported within San Mateo via trucks carrying a variety of materials, including gasoline, other petroleum products, and other chemicals known to cause fire and life safety problems. There is a significant potential for accidental release of wastes in transit due to the presence of US Highway 101 running through the eastern portion of the city. The transport of hazardous materials is regulated by the California Department of Transportation and California Highway Patrol on State and Interstate highways in California. Local agencies have the authority to restrict the use of local roads for waste transport, as well as the time of transit, if not unduly restrictive to commerce.

Generally, selection of transportation routes should minimize the time and distance that hazardous waste is in transit, avoid residential neighborhoods and sensitive receptors, avoid periods and areas of traffic congestion, minimize use of local roads, and provide for adequate emergency response services.

## GOALS, POLICIES, AND ACTIONS

**GOAL S-6** Protect the community's health, safety, and welfare relating to the use, storage, transport, and disposal of hazardous materials.

### POLICIES

- Policy S 6.1 County Cooperation.** Cooperate with the County of San Mateo and San Mateo Consolidated Fire Department in the regulation and transportation of hazardous materials in San Mateo. Share hazardous materials management enforcement with San Mateo County and San Mateo Consolidated Fire Department.
- Policy S 6.2 County Hazardous Waste Management Plan.** Adopt the San Mateo County Hazardous Waste Management Plan by reference into the Safety Element. Make amendments, as necessary, to suit local needs and issues.
- Policy S 6.3 Transportation Routes.** Restrict the transportation of hazardous materials and waste to designated truck routes and limit such transportation to non-commute hours.
- Policy S 6.4 Hazardous Waste Management Facilities Location.** Regulate the location and operation of new hazardous waste management facilities.
- Policy S 6.5 Design of Hazardous Waste Management Facilities.** Require the following features and mitigation measures in the design of proposed hazardous waste management facilities, including life sciences buildings, to minimize potential health, safety, and aesthetic impacts on surrounding properties and occupants:
- For sites in areas subject to flooding or inundation as shown on Figures S-5 and S-6, require facilities to have a surface elevation at least 1.5 feet above the maximum flood water level for areas containing hazardous substances or to be flood-proofed in some other manner suitable to the City.
  - Require facilities to provide for full on-site containment of maximum permitted quantities of hazardous substances, including protection of storm drain or sanitary sewer inlets from accidental entry of hazardous materials.
  - Require facilities to provide separate storage and/or treatment of potentially reactive substances, including separate spill containment vessels. Require that storage of hazardous gases provides adequate filtration and neutralization devices to prohibit accidental release of toxic substances.
  - Require that all storage and treatment occur within an enclosed structure.
  - Require new facilities be sited as far away as possible within the project site from sensitive communities, such as homes, schools, playgrounds, sports fields, childcare centers, senior centers, and long-term healthcare facilities.

**Policy S 6.6 Risk Assessment.** Require applications for hazardous waste management facilities to prepare a risk assessment to determine site suitability. Establish risk criteria such as distance from public facilities, residential, or immobile population and recreation areas; impacts from natural hazards (seismic, geologic, flood, and fire hazards); impacts on wetlands, endangered species, air quality, and emergency response capabilities; and proximity to major transport routes.



**Policy S 6.7 Contaminated Sites.** Require the cleanup of contaminated sites, including those indicated on the Hazardous Waste and Substances Sites List (Cortese List) published by the Department of Toxic Substances Control and/or other agencies, such as the San Mateo County Health Department and the Regional Water Quality Control Board, in conjunction with substantial site development or redevelopment, where feasible.

**Policy S 6.8 Cost Recovery.** Require San Mateo County businesses that generate hazardous waste or applicants for hazardous waste management facilities to pay necessary costs for implementation of Hazardous Waste Management Plans and for application costs, and to pay for costs associated with emergency response services in the event of a hazardous material release, to the extent permitted by law.

## ACTION

**Action S 6.9 Shared Data.** Regularly coordinate with San Mateo County to collect data on businesses that store hazardous substances to share with local emergency service providers, including the Police Department and San Mateo Consolidated Fire Department, as well as the Public Works Department for the wastewater source-control program.





# CHAPTER 9

## Noise Element







# NOISE ELEMENT

## INTRODUCTION

This Noise Element provides the policy framework for controlling, managing, and mitigating excessive noise in the city. These policies will protect land uses that are sensitive to noise, such as residences, schools, and libraries, while minimizing noise from the sources that create them.

### RELEVANCE TO GENERAL PLAN THEMES



#### Sustainability in this Element:

- Reducing noise levels reduces stress for humans and animals, improving the health and well-being of our community and habitats.



#### Environmental Justice in this Element:

- Minimizing and mitigating noise impacts will help alleviate the harmful effects of noise pollution in neighborhoods close to freeways, the rail corridor, and other high-volume roadways, which already experience disproportionate impacts from multiple pollution sources.



#### Community Engagement in this Element:

- Informs the San Mateo community about upcoming land use projects that would contribute to or be affected by a noisy environment.
- Leverages creative outreach strategies to engage with all San Mateo residents, particularly those that live in equity priority communities, about development projects and new activities that could generate noise or mitigate existing noise nuisances.





## NOISE IN SAN MATEO

Sounds can bring joy to the listener, but they can also be a nuisance. Loud sounds can become unwanted noise that could be harmful to our physical, mental, and emotional health. Stress and lost sleep from noise pollution contributes to cardiovascular and metabolic diseases. While noise pollution has the potential to affect all San Mateo residents, existing noise levels are highest in neighborhoods closest to freeways and the rail corridor, compounding the negative health effects of air pollution and other pollution sources in those communities.

San Mateo's vibrant urban environment generates noise on a daily basis. Vehicles create a rhythmic hum that is oftentimes punctuated by honks and other noises as they travel along the city's streets and thoroughfares. Trains traveling on the Caltrain/Southern Pacific rail corridor sound their horns to warn pedestrians, motorists, and others about their impending arrival. This safety measure also creates noise pollution for those that live or work near the rail corridor. Commercial activities and open spaces, such as restaurants, storefronts, and parks help to create a lively atmosphere for social interactions and economic activities. However, they also have the potential to generate noise nuisances, especially for entertainment uses that occur after normal business hours. Other noise sources in the community come from construction activities, aircraft flyovers, landscaping equipment, and fixed mechanical equipment, such as air conditioning units.

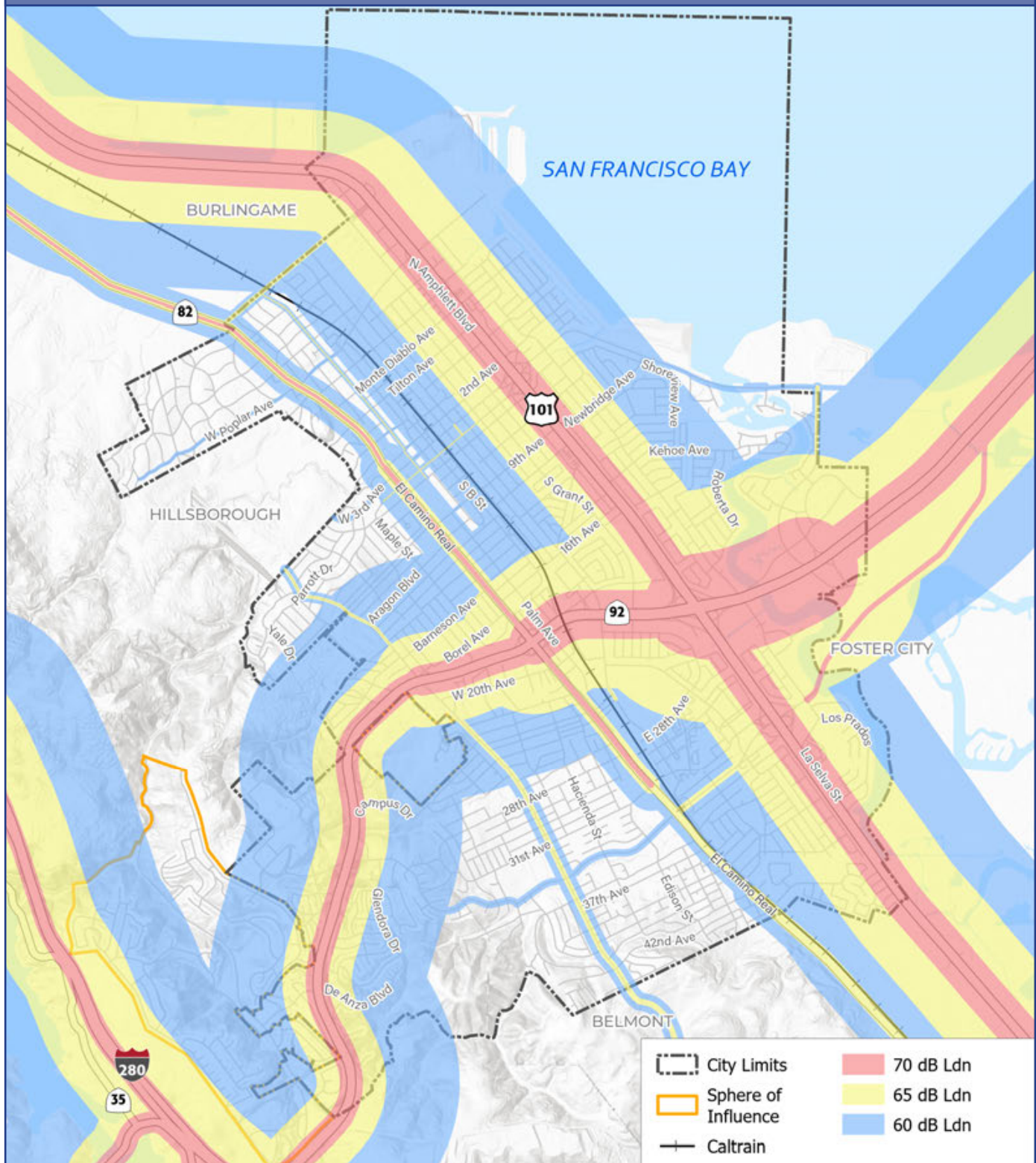
## MEASURING ENVIRONMENTAL NOISE

Environmental noise level or intensity is measured in decibels (dB), which range from 0 dB, the threshold at which people can detect sound, to 140 dB, the threshold where it becomes painful to hear. For every increase of 10 dB, the perceived loudness of noise is doubled. For example, a motorcycle accelerating (90 dB) seems twice as loud as a power lawn mower (80 dB).

This Noise Element uses a unit of measurement called the "A-weighted" decibel scale, which is sometimes expressed as dBA. Humans do not hear all frequencies equally. As a result, this measurement takes into consideration that human hearing decreases at extremely low and high frequencies. State law requires general plans to use the Community Noise Equivalent Level (CNEL) or the Day/Night Average Sound Level ( $L_{dn}$ ) to describe the community noise environment and its effects on the population. The City of San Mateo uses the Day/Night Average Sound Level ( $L_{dn}$ ), which represents a 24-hour average sound level, with an additional 10 dB added for nighttime noise between the hours of 10:00 p.m. and 7:00 a.m., as shown in the land use compatibility standards for noise in Table N-1.

Table N-1 is used to determine whether the existing exterior noise levels that would surround a proposed new use are acceptable or unacceptable and to identify where a proposed project may need to incorporate noise mitigation features. Roadway noise is the primary contributor to the average exterior noise levels in San Mateo. Existing and projected average exterior noise levels in San Mateo are shown in Figures N-1, N-2, and N-3.

Figure N-1 Existing Traffic Noise Contours



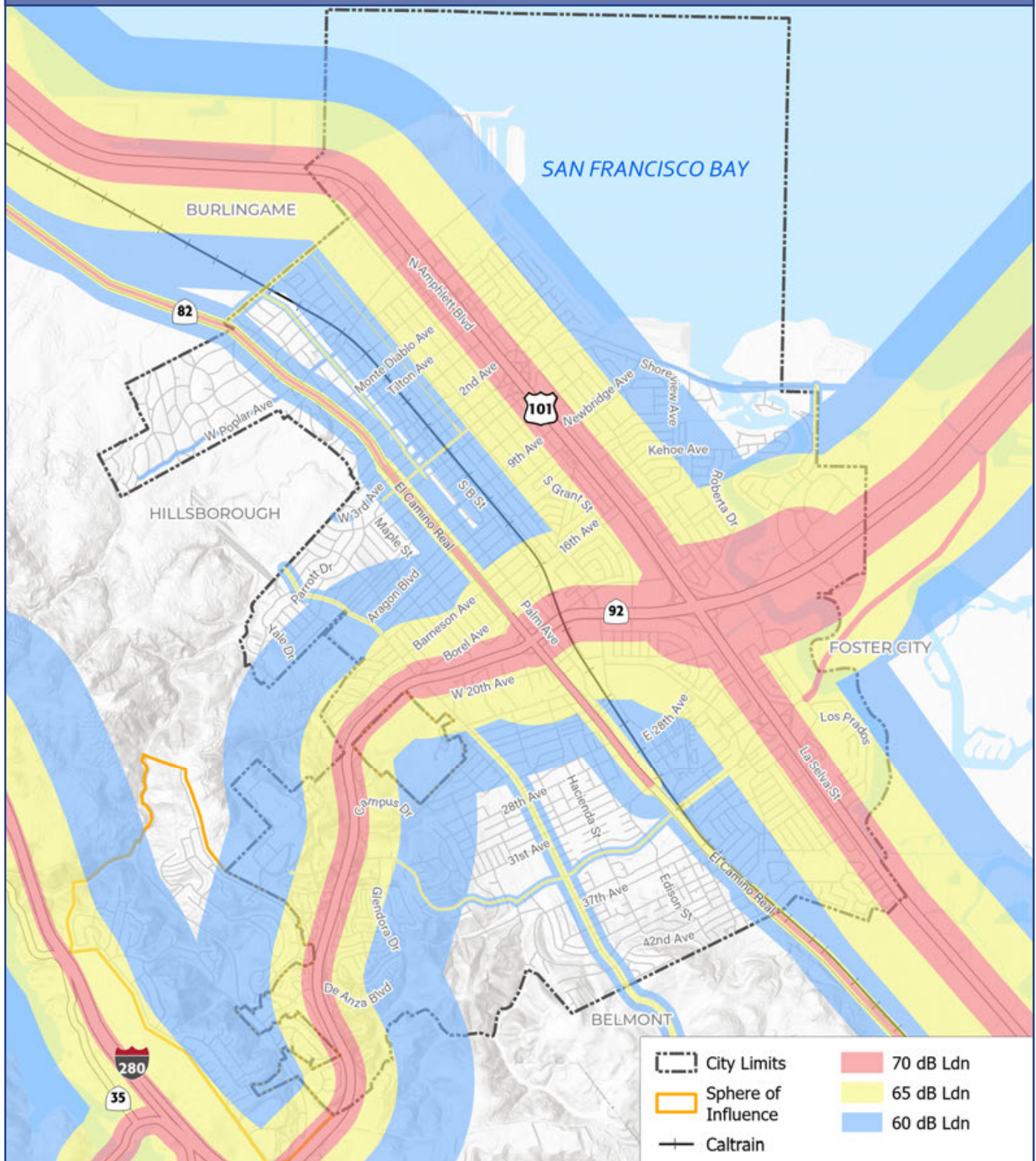
Source: ESRI, 2022; ECORP, 2023; PlaceWorks, 2023.

Note: This map is included for informational purposes and is not adopted as part of this General Plan.





Figure N-2 Future Traffic Noise Contours

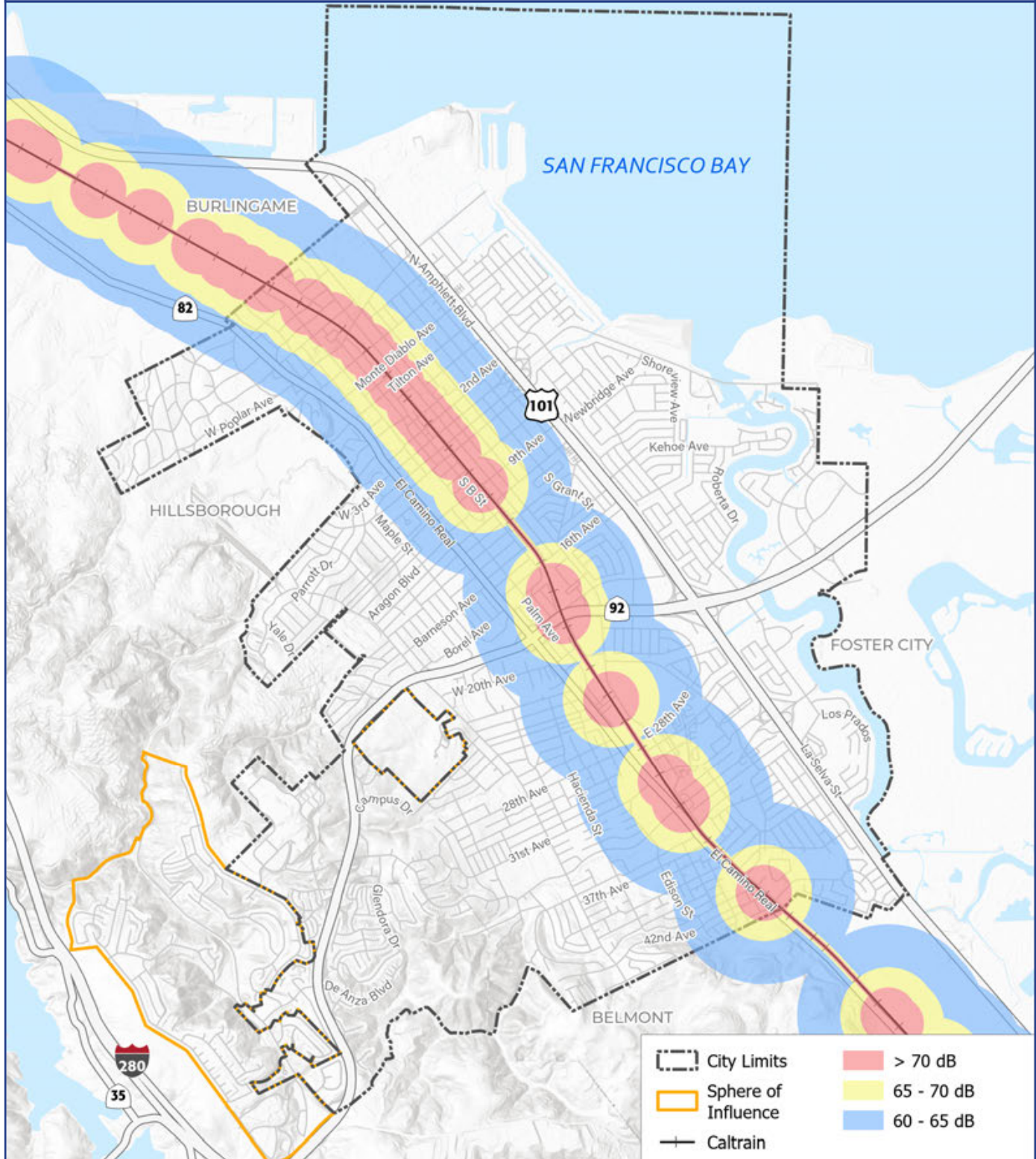


Source: ESRI, 2022; ECORP, 2023; PlaceWorks, 2023.





Figure N-3 Rail Noise Contours



Source: ESRI, 2022; ECORP, 2023; PlaceWorks, 2023.



Table N-1 Land Use Compatibility Guidelines

Land Use Category of Proposed New Use		Day-Night Average Exterior Noise Level, L <sub>dn</sub> (dBA)				
		0 - 59	60 - 65	66 - 70	71 - 80	over 81
Noise-Sensitive Land Uses	Residential (all densities) *					
	Multifamily Common Open Space for Residents					
	Hotels, Motels, and Other Lodging					
	Schools, Libraries, Hospitals, Churches, Long-Term Care Facilities					
	Parks, Playgrounds, Privately Owned Publicly Accessible Open Space					
Office and Commercial						
Research and Development, Industrial						
	<b>Normally Acceptable.</b> Specified land use is satisfactory based on the assumption that any buildings involved are of normal, conventional construction, without any special noise mitigation requirements.					
	<b>Conditionally Acceptable.</b> New construction or development should be undertaken only after a detailed analysis of the noise-reduction requirements is made and needed noise mitigation features have been included in the design.					
	<b>Normally Unacceptable.</b> New construction or development should not be undertaken.					

\* See residential land use designations in the Land Use Element of this General Plan.

## MITIGATING NOISE IMPACTS

Excessive noise in the city can be addressed in three ways: land use planning, physical mitigation, and administrative regulation. Land use planning means considering the existing and future noise environment when reviewing proposed development and locating new uses in a way that minimizes the exposure of new community members to excessive noise. Most of San Mateo is within the “conditionally acceptable” range of between 60 dB and 70 dB ( $L_{dn}$ ), so some form of noise mitigation will likely need to be incorporated into building and site design for any new noise-sensitive land uses listed in Table N-1.

San Mateo’s residential neighborhoods that border US Highway 101, State Route (SR-) 92, El Camino Real, and the railroad corridor are subject to sound levels exceeding 70 dB ( $L_{dn}$ ), as shown in Figures N-1 and N-3. The Land Use Element allows residential and other types of development in these areas, and this Noise Element provides policy guidance to mitigate noise impacts on that new development, such as through site design and construction methods.

Physical mitigation refers to reducing the noise level by controlling how buildings are built and where they are located. For instance, buildings could use sound-absorbing materials to absorb the noise, install walls or windows to reduce the noise indoors, or be located in areas away from sources that produce substantial noise, such as freeways or train tracks. Trees and other vegetation can also help to absorb, deflect, and mask unwelcome noise, while also offering shade and absorbing carbon.

The City’s Noise Control Ordinance is an example of administrative regulations. This ordinance, which is part of the Municipal Code, limits the operating hours and duration of noise sources by decibel level. For example, construction activities are restricted at night so residents can have a quiet and peaceful night of sleep.

Noise mitigation in the city requires a collaborative approach between the City of San Mateo and other agencies. The City has the power to enact the policies in this Noise Element and the regulations in the Noise Control Ordinance. However, many sources of noise pollution are outside of the City’s control. Noise generated from trains that use the Caltrain/Southern Pacific rail corridor, particularly the train horns, is regulated by safety standards set by the Federal Rail Administration. While there is noise pollution from the San Francisco International Airport (SFO), the City has limited influence on flight paths, which are determined by the Federal Aviation Administration (FAA). Additionally, freeways are under the jurisdiction of the California Department of Transportation (Caltrans). Moving forward, the City will continue to work closely with agencies such as Caltrain, Caltrans, and SFO to reduce noise impacts to all those that live, work, and play in San Mateo.





## GOALS, POLICIES, AND ACTIONS

**GOAL N-1** Protect noise-sensitive land uses from excessive noise levels.

### POLICIES

**Policy N 1.1 Noise and Land Use Planning.** Integrate noise considerations into land use planning decisions to minimize noise impacts to or from new development.

**Policy N 1.2 Interior Noise Level Standard.** Require submittal of an acoustical analysis and interior noise insulation for all noise-sensitive land uses listed in Table N-1 that have an exterior noise level of 60 dBA ( $L_{dn}$ ) or above, as shown on Figure N-2. The maximum interior noise level shall not exceed 45 dBA ( $L_{dn}$ ) in any habitable rooms, as established by the California Building Code.

**Policy N 1.3 Exterior Noise Level Standard for Residential Uses.** Require an acoustical analysis for new multifamily common open space for residents that have an exterior noise level of 60 dBA ( $L_{dn}$ ) or above, as shown on Figure N-2. Incorporate necessary mitigation measures into residential project design to minimize common open space noise levels. Maximum exterior noise should not exceed 65 dBA ( $L_{dn}$ ) for residential uses and should not exceed 65 dBA ( $L_{dn}$ ) for public park uses.

**Policy N 1.4 Exterior Noise Level Standard for Parks and Playgrounds.** Require a feasibility analysis of noise-reduction measures for public parks and play areas that have an exterior noise level of 70 dBA ( $L_{dn}$ ) or above.



**Policy N 1.5 Inclusive Outreach.** Notify the community when new land uses that would result in excessive noise levels are being considered and inform community members about how they can engage in the process. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.



## GOAL N-2 Minimize unnecessary, annoying, or unhealthful noise.

### POLICIES

**Policy N 2.1 Noise Regulation.** Regulate noise in San Mateo to prohibit noise that is annoying or injurious to community members.

**Policy N 2.2 Minimize Noise Impacts.** Incorporate necessary mitigation measures into new development design to minimize short-term noise impacts. Determine whether new development has the potential to result in a significant noise impact on existing development based on the following standards. Impacts will be analyzed based on long-term operational noise increases at the sensitive receptor property line, or new uses that generate noise levels at the sensitive receptor property line, as follows:

Ldn Category of Existing Development Per Figures N-1, N-2, and/or N-3	Noise Increase Considered “Significant” over Existing Noise Levels
Normally Acceptable	An increase of more than 5 dBA and the total Ldn exceeds the “normally acceptable” category
Conditionally Acceptable	An increase of more than 5 dBA
Unacceptable	An increase of more than 5 dBA

**Policy N 2.3 Minimize Commercial Noise.** Protect land uses other than those listed as “noise sensitive” in Table N-1 from adverse impacts caused by the on-site noise generated by new developments. Incorporate necessary mitigation measures into development design to minimize short-term and long-term noise impacts. Prohibit new uses that generate noise levels of 65 dBA ( $L_{dn}$ ) or above at the property line, excluding existing ambient noise levels.

**Policy N 2.4 Traffic Noise.** Recognize projected increases in ambient noise levels resulting from future traffic increases, as shown on Figure N-2. Promote reduced traffic speeds and the installation of noise barriers or other methods to reduce traffic noise along highways and high-volume roadways where noise-sensitive land uses (listed in Table N-1) are adversely impacted by excessive noise levels (60 dBA [ $L_{dn}$ ] or above).

**Policy N 2.5 Railroad Noise.** Support the installation of noise barriers and other mitigations along the railroad corridor where noise-sensitive land uses are adversely impacted by excessive noise levels (60 dBA [ $L_{dn}$ ] or greater), as shown in Figure N-3.

**Policy N 2.6 Railroad Vibration.** Require that new residential projects (or other sensitive uses) within 200 feet of existing railroad lines conduct a ground-borne vibration and noise evaluation consistent with Federal Transit Administration-approved methodologies.

**Policy N 2.7 Construction Noise and Vibration Monitoring.** Require construction noise limits and vibration monitoring around sensitive receptors, including through limiting construction hours and individual and cumulative noise from construction equipment. For larger development projects that demand intensive construction periods and/or use equipment that could create vibration impacts, require a vibration impact analysis, as well as monitoring and reporting of noise/vibration levels throughout construction, consistent with industry standards.

## ACTIONS

**Action N 2.8 Conditions of Approval for Noise Monitoring.** Establish conditions of approval for larger development projects to ensure that requirements for construction noise and vibration monitoring. Include a requirement for a monitoring plan that provides information on the monitoring locations, durations and regularity, the instrumentation to be used, and appropriate noise and vibration control measures to ensure compliance with the noise ordinance and any applicable vibration limits.

**Action N 2.9 Railroad Noise Reductions.** Implement projects necessary to achieve Quiet Zones in the city, such as elimination of at-grade rail crossings or other mitigation measures to decrease horn and other operational noise levels, with a focus on achieving Quiet Zones as part of any substantial expansions of the rail service.

**Action N 2.10 Railroad Noise Barriers.** Work with the Peninsula Corridor Joint Powers Board to promote and encourage adequate noise mitigations and barriers to be incorporated into any rail service expansion or track realignment.





# CHAPTER 10

## Abbreviations and Glossary









# ABBREVIATIONS AND GLOSSARY

This glossary explains the technical terms used in this General Plan. Definitions come from several sources, including the California Office of Planning and Research, the California Institute for Local Government, and the American Planning Association *Glossary of Zoning, Development, and Planning Terms*.

## ABBREVIATIONS

<b>AA-T</b>	Arts Degree for Transfer
<b>AB</b>	Assembly Bill (State)
<b>ABAG</b>	Association of Bay Area Governments
<b>ADA</b>	Americans with Disabilities Act
<b>ADU</b>	Accessory Dwelling Unit
<b>AMI</b>	Area Median Income
<b>AS-T</b>	Associate in Science Degree for Transfer
<b>AV</b>	Autonomous vehicle
<b>BAAQMD</b>	Bay Area Air Quality Management District
<b>BART</b>	Bay Area Rapid Transit
<b>BMR</b>	Below Market Rate
<b>BRT</b>	Bus Rapid Transit
<b>BUILD</b>	Better Utilizing Investments to Leverage Development
<b>CalEnviroScreen</b>	California Communities Environmental Health Screening Tool
<b>CAL FIRE</b>	California Department of Forestry and Fire Protection
<b>CalOES</b>	California Governor's Office of Emergency Services
<b>Cal Water</b>	California Water Company
<b>Caltrans</b>	California Department of Transportation
<b>CAP</b>	Climate Action Plan
<b>C/CAG</b>	City/County Association of Governments of San Mateo County
<b>CDFW</b>	California Department of Fish and Wildlife
<b>CEQA</b>	California Environmental Quality Act
<b>CERT</b>	Community Emergency Response Team
<b>CNEL</b>	Community Noise Equivalent Level



<b>CIP</b>	Capital Improvement Program
<b>dB</b>	Decibel
<b>dba</b>	Decibel “A-Weighted”
<b>du/ac</b>	Dwelling units per acre
<b>EAS</b>	Emergency Alert System
<b>EBT</b>	Electronic Benefit Transfer
<b>EIR</b>	Environmental Impact Report
<b>EMS</b>	Emergency Medical Service
<b>EMID</b>	Estero Municipal Improvement District
<b>EV</b>	Electric Vehicle
<b>FAR</b>	Floor Area Ratio
<b>FAST</b>	Fixing America’s Surface Transportation
<b>FEMA</b>	Federal Emergency Management Agency
<b>FHSZ</b>	Fire Hazard Severity Zone
<b>FIRM</b>	Flood Insurance Rate Map
<b>FRAP</b>	Fire and Resource Assessment Program
<b>GHG</b>	Greenhouse Gas
<b>GIS</b>	Geographic Information Systems
<b>GPA</b>	General Plan Amendment
<b>GPS</b>	General Plan Subcommittee
<b>ITS</b>	Intelligent Transportation Systems
<b>JPB</b>	Joint Powers Board
<b>LAFCO</b>	Local Agency Formation Commission
<b>Ldn</b>	Day/Night Average Sound Level
<b>LID</b>	Low Impact Design
<b>LOS</b>	Level of Service
<b>LRA</b>	Local Responsibility Area
<b>MFD</b>	Multi-Family Dwelling
<b>MJHMP</b>	Multi-Jurisdictional Hazard Mitigation Plan
<b>MMRP</b>	Mitigation Monitoring and Reporting Program
<b>MTC</b>	Metropolitan Transportation Commission

<b>ODS</b>	Objective Design Standards
<b>OneShoreline</b>	San Mateo County Flood and Sea Level Rise Resiliency District
<b>PCE</b>	Peninsula Clean Energy
<b>PG&amp;E</b>	Pacific Gas and Electric Company
<b>PSPS</b>	Public Safety Power Shutoff
<b>RHNA</b>	Regional Housing Needs Allocation
<b>SB</b>	Senate Bill (State)
<b>SLR</b>	Sea Level Rise
<b>SPAR</b>	Site Plan and Architectural Review
<b>SFD</b>	Single-Family Dwelling
<b>SFPUC</b>	San Francisco Public Utilities Commission
<b>SF RWS</b>	San Francisco Regional Water System
<b>SMC Fire</b>	San Mateo Consolidated Fire Department
<b>SMCTA</b>	San Mateo County Transportation Authority
<b>SMPD</b>	San Mateo Police Department
<b>SOI</b>	Sphere of Influence
<b>SR-</b>	State Route
<b>SRA</b>	State Responsibility Area
<b>SVS</b>	Social Vocational Services
<b>TAC</b>	Toxic Air Contaminant
<b>TDM</b>	Transportation Demand Management
<b>TIA</b>	Transportation Impact Analysis
<b>TNC</b>	Transportation Network Company
<b>TOD</b>	Transit Oriented Development
<b>USACE</b>	United States Army Corps of Engineers
<b>VMT</b>	Vehicle Miles Traveled
<b>VHFHSV</b>	Very High Fire Hazard Severity Zone
<b>WUI</b>	Wildland-Urban Interface

## TERMINOLOGY

**21 Elements.** A multi-year, multi-phase collaboration of all 21 San Mateo County jurisdictions, along with partner agencies and stakeholder organizations.

**Acreage.** The land area that exists prior to any dedications for public use, health, and/or safety purposes.

**Action.** A measure, procedure, or technique that helps the City achieve a specific goal. An action is something concrete that can and will be completed. (see “Goal”)

**Adaptation.** Making changes in response to current or future conditions (such as the increased frequency and intensity of climate-related hazards), usually to reduce harm and take advantage of new opportunities.

**Adaptive Management.** A flexible, iterative decision making process that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood.<sup>1</sup>

**Adverse Impact.** A negative consequence for the physical, social, or economic environment resulting from an action or project.

**Affordability, Housing.** The relation of housing costs to household income.

**Affordable Housing.** A for-sale housing or rental housing affordable to households whose incomes do not exceed 120 percent of the area median income (moderate- or lower-income households).

**Archaeological Resource.** Material evidence of past human activity found below the surface of ground or water, portions of which may be visible above the surface.

**Assembly Bill (AB).** A State law or bill originating from the State Assembly. The abbreviation “AB” preceeds the specific bill number.

**Association of Bay Area Governments.** The regional planning agency for the nine Bay Area counties, including San Mateo County, and the 101 cities and towns within these counties.

**Asset.** A valued feature of a community that may be harmed by climate change. Assets may include buildings, infrastructure, community services, ecosystems, and economic drivers.

**Below Market Rate Unit.** A below market rate unit is an affordable housing unit (see Affordable Housing definition).

**Buffer.** An area established between potentially conflicting land uses, which, depending on the potential impact, may use landscaping or structural barriers such as yards or roads.

**Bicycle Class Facilities.** A classification system for bicycle paths and roadways identified in the California Highway Design Manual.

**Shared-use paths (Class I):** Off-road pathways designed for people walking, biking, and rolling (e.g., skateboard or scooter).

**Separated bike lanes (Class IV):** A designated lane separated from vehicular traffic by a buffer with vertical protection (e.g., flexible posts, planters, parked vehicles, curbs).

1 U.S. Department of the Interior, 2009. *Adaptive Management, The U.S. Department of the Interior Technical Guide*, page 5.



**Buffered bike lanes (Class II):** A designated bicycle lane adjacent to vehicular traffic separated by a striped buffer area on the pavement.

**Standard bike lanes (Class II):** A designated bicycle lane directly adjacent to vehicular traffic.

**Bicycle boulevards (Class III):** Bicyclists share a lane with vehicular traffic and are identified with bicycle signage and pavement markings to increase driver awareness of bicyclists and aid bicyclists with navigation; however, bicycle boulevards include traffic-calming treatments and are solely implemented on low-speed (i.e., less than 25 mile per hour) and low-volume (i.e., less than 3,000 vehicles per day) streets to ensure they are low-stress facilities.

**Bicycle routes (Class III):** Bicyclists share the lane with vehicular traffic and are identified with bicycle signage and pavement markings to increase driver awareness of bicyclists and aid bicyclists with navigation. The City is phasing out this type of route within the bicycle network and upgrading to other facility types.

**Building.** A structure with substantial walls and roof designed for the shelter, enclosure, or protection of persons, animals, chattels, or property of any kind. (see “Structure”)

**Building Code.** Standards adopted by the State governing the construction, alteration, demolition, occupancy, or other use of buildings used for human habitation. The State regulations are substantially the same as those contained in the most recent editions of the Uniform Building Code, Uniform Housing Code, Uniform Plumbing Code, Uniform Mechanical Code, and the National Electric Code. Local governments may have stricter standards under certain circumstances.

**California Environmental Quality Act.** Legislation and corresponding procedural components established in 1970 by the State of California to require environmental review for projects anticipated to result in adverse impacts to the environment. (see “Environmental Impact Report”)

**Capital Improvement Program.** A program that schedules permanent improvements, usually for a minimum of five years in the future, that fits the projected fiscal capability of the local jurisdiction. The program generally is reviewed on an annual basis for conformance to and consistency with the General Plan.

**Carbon Neutral.** Reducing greenhouse gas (GHG) emissions to zero, either by entirely eliminating all GHG emissions or by balancing out all remaining GHG emissions through carbon removal practices so that the “net” emissions are zero.

**City.** City with a capital “C” generally refers to the City of San Mateo government or administration. City with a lower case “c” may mean any city or may refer to the geographical area.

**City Limits.** The legal boundaries of the geographical area subject to the jurisdiction of the City of San Mateo’s government. For example, development applications for properties located within the City Limits must be reviewed by the City.

**Clean Air Refuge.** A building with efficient air filtration and improved air quality that is opened to community members during poor air quality days.

**Climate Change.** Long-term shifts in temperatures and weather patterns that have come to define the Earth’s local, regional and global climates. In the context of this plan, this term refers to changes brought on by human activities, also known as anthropogenic climate change.

**Compatible.** Capable of existing together without conflict or ill effects.

**Complete Street.** A transportation facility that is planned, designed, constructed, operated, and maintained to provide comfortable and convenient mobility, and improve accessibility and connectivity to essential community destinations for all users and abilities, regardless of whether they are travelling as pedestrians, bicyclists, wheelchair users, public transportation riders, or drivers. Complete streets are especially attuned to the needs of people walking, using assistive mobility devices, rolling, biking, and riding transit.

**Complete Streets Act.** A law that requires all road construction and improvement projects to evaluate how the right-of-way serves all who use it, including pedestrians, bicyclists, and transit users.

**Conservation.** The management and use of natural resources in a sustainable manner. Conservation results in land and water areas that are protected and managed for durability to sustain functional ecosystems, both intact and restored, and the diversity of life they support.

**Conserve.** To manage natural resources sustainably.

**Critical Facility.** A facility whose continued functioning is necessary to maintain public health and safety following a disaster, and where damage or failure could pose hazards to life and property well beyond their immediate vicinity.

**Cultural Resource.** A historic, archaeological, tribal, or paleontological resource or human remains. Cultural resources include tribal cultural resources, as defined in California Public Resources Code Section 21074, regardless of whether a tribe is federally recognized.

**Decibel (dB).** A unit used to express the relative intensity of a sound as it is heard by the human ear. The lowest volume a normal ear can detect under laboratory conditions is 0 decibel, the threshold of human hearing. Since the decibel scale is logarithmic, 10 decibels are 10 times more intense and 20 decibels are 100 times more intense than 1 decibel.

**Decibel, A-weighted (dBA).** The “A-weighted” scale for measuring sound in decibels, which weighs or reduces the effects of low and high frequencies to simulate human hearing. Every increase of 10 dBA doubles the perceived loudness, even though the noise is actually 10 times more intense.

**Dedication.** Giving private land for public use, and the acceptance of land for such use by the governmental agency having jurisdiction over the public function for which it will be used. Dedications for roads, parks, school sites, or other public uses are often required by a city or county as conditions for approval of a development. (see “In-Lieu Fee”)

**Density.** The number of permanent residential dwelling units per acre of land (du/acre). Densities specified in this General Plan are expressed in dwelling units per net acreage, excluding land area that may be devoted to public right-of-way, including roadways..

**Development Review.** The comprehensive evaluation of a development and its impact on neighboring properties, the environment, and the community as a whole, from the standpoint of site and landscape design, architecture, materials, lighting, and signs, in accordance with a set of adopted criteria and standards.

**Development.** The physical expansion and/or construction of non-farm land uses. Development activities include subdivision of land; construction of a single-family dwelling on an existing lot; construction or alteration of structures, roads, utilities, and other facilities; grading; deposit of refuse, debris, or fill materials; and clearing of natural vegetative cover (with the exception of agricultural activities). Routine repair and maintenance activities are not considered development.

**Development Fees.** Direct charges or dedications collected on a one-time basis for a service provided or as a condition of approval being granted by the local government. The purpose of the fee or exaction must directly relate to the need created by the development. In addition, its amount must be proportional to the cost of the service or improvement. Fees can be broken down into two major classes: (1) service charges, such as permit fees covering the cost of processing development plans, connection, or standby fees for installing utilities, or application fees for reviewing and considering development proposals; and (2) “impact” fees levied on new development to cover the cost of infrastructure or facilities necessitated by development. (See “Impact Fee”)

**Disability, persons with.** A physical impairment or mental disorder, which is expected to be of a long, continued, or indefinite duration and is of such a nature that the person’s ability to live independently could be hindered unless improved by more suitable housing conditions.

**Duplex.** A free-standing house divided into two separate living units or residences, usually having separate entrances; or two single-family detached dwelling units on a single lot.

**Dwelling Unit.** The place of customary abode of a person or household, which is either considered to be real property under State law or cannot be easily moved.

**Ecosystem.** An interacting system formed by a biotic community and its physical environment.

**Electric Vehicle.** A zero-emission vehicle that uses electricity stored in a battery to power one or more electric motors and can be plugged in at home, work, fleet, or public charging stations.

**Environmental Impact Report.** A study required pursuant to the California Environmental Quality Act that assesses all the environmental characteristics of an area, determines what effects or impacts will result if the area is altered or disturbed by a proposed action, and identifies alternatives or other measures to avoid or reduce those impacts. (see “California Environmental Quality Act”)

**Equity.** The state in which each individual or group is allocated or has access to the resources needed to reach an equal or fair outcome.

**Equity Priority Community.** A low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation. This is the term the City of San Mateo uses in place of “disadvantaged communities,” as named in Senate Bill (SB) 1000. SB 1000 defines disadvantaged communities per Health and Safety Code Section 39711, specifying CalEnviroScreen as the primary screening method for identifying these communities.

**Erosion.** The process by which soil and rock are detached and moved by running water, wind, ice, and gravity.

**Evacuation Route.** A roadway designated in the General Plan as a potential recommended route to travel when evacuating from a hazardous condition.



**Evacuation-Constrained Parcels.** Parcels located on a single-access road that do not have at least two ingress/egress routes.

**Exposure.** The presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.

**Farmers' Market.** A mobile or non-mobile market: (1) operated by a local government agency, one or more certified producers, or a nonprofit organization; (2) certified by and operating in a location approved by the County Agricultural Commissioner; and (3) where farmers sell directly to consumers agricultural products or processed products made from agricultural products that the farmers grow themselves.

**Fault.** A fracture in the earth's crust that forms a boundary between rock masses that have shifted.

**Fire Hazard Severity Zone.** An area of significant fire hazard based on fuels, terrain, weather, and other relevant hazards.

**Flood, 100-Year.** In any given year, a flood that has a 1 percent likelihood (a 1 in 100 chance) of occurring, and is recognized as a standard for acceptable risk.

**Flood, 500-Year.** In any given year, a flood that has a 0.2 percent likelihood (a 1 in 500 chance) of occurring.

**Floodplain.** The relatively level land area on either side of the banks of a stream regularly subject to flooding.

**Floor Area Ratio.** The size of a building in square feet (gross floor area) divided by gross land area, expressed as a decimal number. For example, a 60,000-square-foot building on a 120,000-square-foot parcel would have a floor area ratio of 0.50. The FAR is used in calculating the building intensity of development.

**Garden, Community.** A shared, semi-public space where people in the surrounding neighborhood share the work and harvest of maintaining a plot of fruits, vegetables, or other plants. Community gardens provide residents with an opportunity to grow fresh produce, flowers, or other plants on land that they do not own. Community gardens can also serve an educational function, especially when operated by community organizations or educational institutions.

**Gateway.** A unique transition point in topography, architecture, or land use that serves as an entrance to the city or specific neighborhoods within the city.

**General Plan.** A collection of City policies regarding its long-term development, in the form of maps and accompanying text. The General Plan is a legal document required of each local agency by the State of California Government Code Section 65301 and adopted by the City Council.

**Geographic Information Systems.** A combination of approaches, programs, methodologies, and technologies to map, gather, store, manipulate, analyze, present, and interpret spatial information and data.

**Goal.** A description of the general desired result sought by the City. Each goal has one or more policies and/or actions associated with the goal. (see "Policy" and "Action")

**Greenhouse Gas.** A gas that allows sunlight to pass through but reflect heat radiated from the earth's surface, trapping heat in the lower atmosphere. Common greenhouse gases (GHGs) include water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). They may be emitted by natural or human processes.

**Groundwater.** Water that exists beneath the earth’s surface, typically found between saturated soils and rock, and is used to supply wells and springs.

**Habitat.** The physical location or type of environment in which an organism or biological population lives or occurs.

**Hazard.** An event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural losses, damage to the environment, interruption of business, or other types of harm or loss.

**Hazard Mitigation.** Sustained action taken to reduce or eliminate the long-term risk to human life and property through actions that reduce hazard, exposure, and vulnerability.

**Hazardous Material, Hazardous Waste.** A substance or waste that, because of its physical, chemical, or other characteristics, may pose a risk of endangering human health or safety or of degrading the environment. This does not include household hazardous waste, universal waste, or electronic waste, as they do not contain the quantity, concentration, and/or types of products significant enough to pose a substantial risk to human health and safety or to the environment.

**Historic Resource.** A historic resource is a building, structure, site, or district that has one or more of the following characteristics:

- Listed in or determined to be on or individually eligible for listing in the National Register of Historic Places and/or California Register of Historical Resources.
- Identified as a Downtown Historic District or Glazenwood Historic District contributor building as designated in the 1989 Historic Building Survey Report.
- Determined to be eligible through documentation contained in a historic resources report.

**Horizon Year.** The year through which the General Plan is intended to be effective, or 2040.

**Household.** All persons occupying one dwelling unit.

**Human Scale.** Buildings, structures, streetscape, and other urban design elements that are of a size and proportion that relates to the size of a human to create a comfortable and inviting experience.

**Impact, Climate.** The effects (especially the negative effects) of a hazard or other condition associated with climate change.

**Impact Fee.** A fee imposed on a proposed development project by a jurisdiction to address impacts to city services or infrastructure, based on the number of units, square footage, or acreage. The fee is often used to offset costs of schools, roads, police and fire services, housing, and parks. (See “Development Fee”)

**Implementation.** Actions, procedures, programs, or techniques that carry out a plan.

**Infill Development.** Development that occurs on vacant or underutilized land within areas that are already largely developed.

**In-Lieu Fee.** A fee that may be required of an owner or developer as a substitute for a dedication of land or an asset for public use, such as public art, replacement of trees, or parking spaces, usually calculated in dollars per lot, and referred to as in-lieu fees or in-lieu contributions. (see “Dedication”)

**King Tides.** Abnormally high, predictable astronomical tides that occur about twice per year, with the highest tides occurring when the Earth, Moon, and Sun are aligned.

**Land Use.** The occupation or use of an area of land for any human activity or purpose.

**Land Use Designation.** One particular land use category, from a range of land use classifications, assigned to a parcel as established by the General Plan Land Use Element.

**Landslide.** Movement of soil and/or rock down a slope, which typically occurs during an earthquake or following heavy rainfall.

**Liquefaction.** The transformation of loose, wet soil from a solid to a liquid state, often as a result of ground shaking during an earthquake.

**Local Agency Formation Commission.** A five- or seven-member commission within each county that reviews and evaluates all proposals for formation of special districts, incorporation of cities, annexation to special districts or cities, consolidation of districts, and merger of districts with cities. Each county's LAFCO is empowered to approve, disapprove, or conditionally approve such proposals.

**Maximum Development.** Development of land to its full potential, or theoretical capacity, as permitted under current or proposed planning or zoning designations.

**Micro Agriculture.** The practice of growing and processing fresh food in an urban area.

**Micromobility.** Transportation via small, lightweight vehicles, typically electric assisted, operated by the driver, such as electric scooters and bicycles. Vehicles typically do not exceed 15 miles per hour and are often available for rent for short-range travel within a defined area.

**Mitigation.** A protective measure or modification of a project to avoid, reduce, minimize, or eliminate a negative impact. There are various types of mitigation, including environmental impact mitigation, hazard mitigation, greenhouse gas emissions mitigation, and more.

**Mixed-Use.** Any mix of land uses, including mixing residences with commercial, offices with retail, or visitor accommodation with offices and retail. As distinguished from a single-use land use designation or zone, mixed use refers to an authorized variety of uses for buildings and structures in a particular area. When the mix of uses is within one building, its called vertical mixed-use. A type of mixed-use development where uses are behind or next to each other but in different buildings on the same development site is called horizontal mixed use.

**Multimodal Level of Service.** A scale that measures the performance of vehicle, bicycle, pedestrian, and transit facilities.

**Municipality.** An incorporated city or town.

**Neighborhood.** Relatively large residential areas that have some common characteristics, such as a common history, neighborhood association, or common physical characteristics (e.g., architectural style), a common meeting place, intangible characteristics (e.g., a psychological sense of cohesion), or clear physical boundaries (e.g., waterways or major roads).

**Noise Contour.** A line connecting points of equal noise level as measured on the same scale.



**Noise-Sensitive Use.** A location where people reside or where the presence of unwanted sound could adversely affect the use of land, such as residences, schools, and hospitals.

**Non-Conforming Use.** A use that was legally allowed when brought into existence, but no longer permitted by current regulation. “Non-conforming use” is a generic term and includes: (1) non-conforming structures (because their size, type of construction, location on land, or proximity to other structures is no longer permitted); (2) non-conforming use of a conforming building; (3) non-conforming use of a non-conforming building; and (4) non-conforming use of land. Any use lawfully existing on any piece of property that is inconsistent with a new or amended General Plan, and that in turn is a violation of a Zoning Ordinance amendment subsequently adopted in conformance with the General Plan, will be a non-conforming use. Typically, non-conforming uses are considered “grandfathered in” and permitted to continue, subject to certain restrictions on discontinuance or rehabilitation.

**Nonessential Idling.** Unnecessary operation of a gas-powered vehicle while it is stationary when none of the following circumstances are met: the vehicle is stuck in traffic; idling is necessary to inspect or service the vehicle; the vehicle is transferring power via a power-takeoff device; the vehicle can’t move due to adverse weather conditions or mechanical failure; the vehicle is a bus with passengers on board. See California Code of Regulations, Title 13, Section 2485, for a full definition.

**Overlay.** A land use or zoning designation that modifies the basic underlying designation or designations in some specific manner.

**Parcel.** An area of land that is a legally created lot.

**Park.** Tract of land set aside for public use, aesthetic enjoyment, recreation, or the conservation of natural resources.

**Regional Park:** Regional Parks are of a relatively expansive size and their unique natural and cultural attractions draw visitors from the entire region. These parks usually have many uses and require a higher level of management when compared to smaller parks such as city parks, neighborhood parks, recreation centers, and pocket parks, which have fewer activities and primarily serve local residents.

**Community Park:** Community parks serve the needs of a range of people, from several neighborhoods to the entire city. They typically contain a wide variety of facilities for active and passive recreation, and organized sports. They also provide amenities typical of neighborhood parks for use by the surrounding residents. Parks containing fewer elements but that contain facilities that serve the entire city may be considered to be community parks.

**Neighborhood Park:** Neighborhood Parks provide for the daily recreation needs of nearby residents, with primarily passive and informal recreation facilities. Neighborhood parks often include play areas, picnic areas, open turf areas or green space, basketball courts, and tennis courts. The neighborhood parks also may contain play fields.

**Mini Parks:** Mini parks are small parks, generally less than one acre in size, that accommodate the daily recreation needs of nearby residents. They typically include children’s play areas, sitting areas, and limited green space, but are not large enough to contain play fields.

**Policy.** A specific statement that guides decision making as the City works to achieve a goal. Policies represent statements of City regulation and set the standards used by decision makers when considering proposed development and actions. A policy is ongoing and requires no further action (see “Goal”).

**Reach Code.** A local municipal code that exceeds the State Building Code requirements. A reach code must be at least as stringent as the State Code, cost-effective, approved by the California Energy Commission, and updated and re-approved with each State Energy Code update.

**Reconstruction.** Redevelopment of a building or structure, after being damaged or destroyed in a disaster, to its original state.

**Resilience.** The capacity of any entity—an individual, community, organization, or natural system—to prepare for disruptions, recover from shocks and stresses, and adapt and grow from a disruptive experience. Community resilience is the ability of communities to withstand, recover, and learn from past disasters to strengthen future response and recovery efforts.

**Rewilding.** Returning land to its natural state to regenerate natural areas. In contrast to restoration, rewilding focuses on returning ecosystems to their former states as close as possible while allowing for plant, animal, and other ecosystem substitutions to account for changing future conditions.

**Riparian.** A habitat and vegetation zone that is associated with the banks and floodplains of a river, stream, or lake. Riparian trees and shrubs are typically phreatophytes, plants whose root systems are in constant contact with groundwater.

**Risk.** The potential for damage or loss created by the interaction of hazards with assets such as buildings, infrastructure, or natural and cultural resources.

**Roadway Classifications.** Roadway classifications define the function of various street types in the transportation network. The City of San Mateo classifies its roadways using the Caltrans Functional Classification System.

**Local Streets and Alleyways:** Local streets and alleyways make up the majority of the roadway system and typically have lower speeds and vehicular traffic volumes.

**Collectors:** Collectors link neighborhoods together and allow travelers to reach places outside of their neighborhoods. They have higher speeds than local streets and can handle more traffic volume. Collectors are important segments of San Mateo’s existing and proposed bikeway network.

**Arterials:** Arterial streets connect the regional roadway network with collectors. Most intersections along arterials are signalized, often with a coordinated and interconnected signal system. Compared to collectors, arterials have higher capacity to accommodate traffic volumes, and they provide for longer, continuous movement throughout the city.

**Freeways:** Freeways are high-speed roadways without intersections that allow residents to reach destinations outside of the city, either by car or transit. US Highway 101 and State Route 92 run through the city, while Interstate 280 is just west of the City Limits.

**Safe Routes to School.** Pedestrian and bicycling routes that provide children with safe access to and from schools.

**Scenic Roadways; Scenic Trails.** Land that is visible from, adjacent to, and outside a roadway right-of-way, and is made up primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional lines determine the scenic corridor boundaries.

**Sea Level Rise.** The worldwide average rise in mean sea level, which may be due to a number of different causes, such as the thermal expansion of sea water and the addition of water to the oceans from the melting of glaciers, ice caps, and ice sheets, including as a result of climate change.

**Seniors.** People 65 years of age or older.

**Sensitive Habitat.** Land containing unique, representative, threatened, and/or endangered plant and animal communities, or ecosystems.

**Sensitive Receptor.** A use that is highly sensitive to impacts from other uses, including homes, schools, playgrounds, sports fields, childcare centers, senior centers, hospitals, and long-term healthcare facilities.

**Sensitivity.** The level to which a species, natural system, community, or government would be affected by changing climate conditions.

**Severe Ground Shaking.** Intense ground movement resulting from the transmission of seismic waves during an earthquake.

**Specific Plan.** Under Article 8 of the Government Code (Section 65450 et seq.), a legal tool for detailed design and implementation of a defined portion of the area covered by a General Plan. A Specific Plan may include all or a part of detailed regulations, conditions, programs, and/or proposed legislation that may be necessary or convenient for the systematic implementation of any General Plan element(s).

**Sphere of Influence.** The probable physical boundaries and service area of a municipality or special district, as determined by the Local Agency Formation Commission of the county.

**Stormwater.** Water that comes from a rain event.

**Structure.** Anything constructed or erected on and permanently attached to the ground, except fences six feet or less in height (see “Building”).

**Sustainability.** Meeting the needs of the present without compromising the ability of future generations to meet their own needs in three key realms, or pillars: economic viability, environmental protection, and social equity.

**Toxic Air Contaminant.** An air pollutant that may cause or contribute to an increase in serious illness, or that may pose a present or potential hazard to human health, according to California Health and Safety Code Section 39655.

**Traffic Calming.** Measures designed to reduce motor vehicle speeds and to encourage pedestrian and bicycle use, including narrow streets with fewer lanes, tight turning radii, sidewalk bulbouts, parking bays, textured paving at intersections, and parkways between sidewalks and streets.

**Transit-Oriented Development.** The clustering of homes and jobs at higher densities within a half mile of a rail station or bus service with 15 minute headways or less.



**Triplex.** A free-standing house divided into three separate living units or residences, usually having separate entrances, or three single-family detached dwelling units on a single lot.

**Unincorporated Area.** Land that is outside of an incorporated city and falls under a County’s jurisdiction. Development proposals in unincorporated areas need County review and approval.

**Use.** The purpose for which a lot or structure is or may be leased, occupied, maintained, arranged, designed, intended, constructed, erected, moved, altered, and/or enlarged in accordance with the City Zoning Code and the General Plan land use designations.

**Wastewater.** Water that contains other elements, such as sewage, small pathogens, organic matter, and inorganic contaminants. This term is also used to refer to water generated in industrial plants and commercial activity.

**Wetland.** An area that is seasonally or permanently inundated or saturated by surface water or ground-water at a frequency and duration sufficient to support a distinct ecosystem with a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation. Wetlands may be coastal or inland.

**Wildland-Urban Interface.** An area that includes both houses and wildland vegetation, creating a significant threat to human life or property from wildfires.

**Zoning.** Zoning implements the land use policies of the General Plan. The adopted codes of a City by ordinance or other legislative regulation that identifies districts or zones citywide. These zones specify allowable uses for real property, as well as standards for buildings constructed in these areas.







[StriveSanMateo.org](https://www.StriveSanMateo.org)





# City of SAN MATEO



## CLIMATE ACTION PLAN







## CLIMATE ACTION PLAN

Adopted by the San Mateo City Council on April 6, 2020 by Resolution 31(2020)

Technical Update – July 2023, Public Review Draft

Prepared for the City of San Mateo by:

PlaceWorks in collaboration with DNV GL









## ACKNOWLEDGEMENTS (2020)

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## ACKNOWLEDGEMENTS (2023)

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Sidewalk art from the City's 2014 Downtown Cleanup.

*Photo by City of San Mateo*

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## List of Abbreviations

Acronym/Abbreviation	Term
AB	Assembly Bill
ABAG	Association of Bay Area Governments
BAAQMD	Bay Area Air Quality Management District
BAU	business-as-usual
CALGreen	California Green Building Standards
CAP	Climate Action Plan
CARB	California Air Resources Board
C/CAG	City/County Association of San Mateo County
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CO <sub>2</sub>	carbon dioxide
EIR	environmental impact report
EMFAC	CARB Emission Factor
GHG	greenhouse gas
I-	Interstate
kW	kilowatt
kWh	kilowatt-hour
MPO	metropolitan planning organization
MTC	Metropolitan Transportation Commission
MTCO <sub>2</sub> e	metric tons of carbon dioxide equivalent
OPR	Office of Planning and Research
PCE	Peninsula Clean Energy

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Acronym/Abbreviation	Term
PG&E	Pacific Gas and Electric Company
RICAPS	Regionally Integrated Climate Action Planning Suite
RPS	Renewables Portfolio Standard
SB	Senate Bill
SCS	sustainable communities strategy
SR-	State Route
TDM	Transportation Demand Management
TMA	transportation management agency
TNC	Transportation network company
TOD	transit-oriented development
USEPA	US Environmental Protection Agency
VMT	vehicle miles traveled





## Executive Summary

### PURPOSE OF THE CLIMATE ACTION PLAN

This Climate Action Plan (CAP) is San Mateo's comprehensive strategy to reduce greenhouse gas (GHG) emissions. It demonstrates the leadership of community members and the City on sustainability and GHG reduction. San Mateo's General Plan directs the preparation, ongoing implementation and update of the CAP, providing the framework for San Mateo to reduce its community-wide GHG emissions in a manner consistent with state reduction targets and goals for 2030 and 2045. The CAP is prepared consistent with the California Environmental Quality Act (CEQA) Guidelines for Plans for the Reduction of Greenhouse Gas Emissions (California Code of Regulations Section 15183.5). This allows the CAP to support and possibly streamline environmental review of GHG emissions related to future development projects within the city.

This CAP is a direct update to the 2015 CAP. The CAP analyzes San Mateo's progress to date in meeting its GHG reduction targets and contains new information to achieve more significant and longer-term GHG reductions. It also presents a work plan and monitoring program for the City to track progress over time and maintain the status of the CAP as a qualified GHG reduction strategy for the purposes of CEQA streamlining. Since the City's adoption of the CAP in 2020, the State of California has accelerated its actions and commitments to reduce statewide GHG emissions. In addition to State targets, the CAP and General Plan must follow regional air district guidance and thresholds to serve as the City's qualified GHG reduction strategy. In 2022, the Bay Area Air Quality Management District (BAAQMD) approved new thresholds of significance to determine whether a proposed project, including general plans and CAPs, will have a significant impact on climate change. In response to these changes, the City completed this technical update to the 2020 CAP so that it is consistent with the Strive San



# EXECUTIVE SUMMARY

Mateo General Plan 2040 and continues to serve as the City's qualified GHG reduction strategy, as it has since 2015.

## Local Leadership

San Mateo has an extensive history of action on GHG reduction and other environmental sustainability actions. This CAP allows community members, City staff and officials, and other stakeholders to understand San Mateo's existing planning efforts and strategies to achieve its GHG reduction goals. It builds on several earlier efforts, including the 2007 Sustainable Initiatives Plan, the Greenhouse Gas Emissions Reduction Program, the Climate Action Plan for Operations and Facilities, the 2015 CAP, and many other local accomplishments to date.

## Planning Process

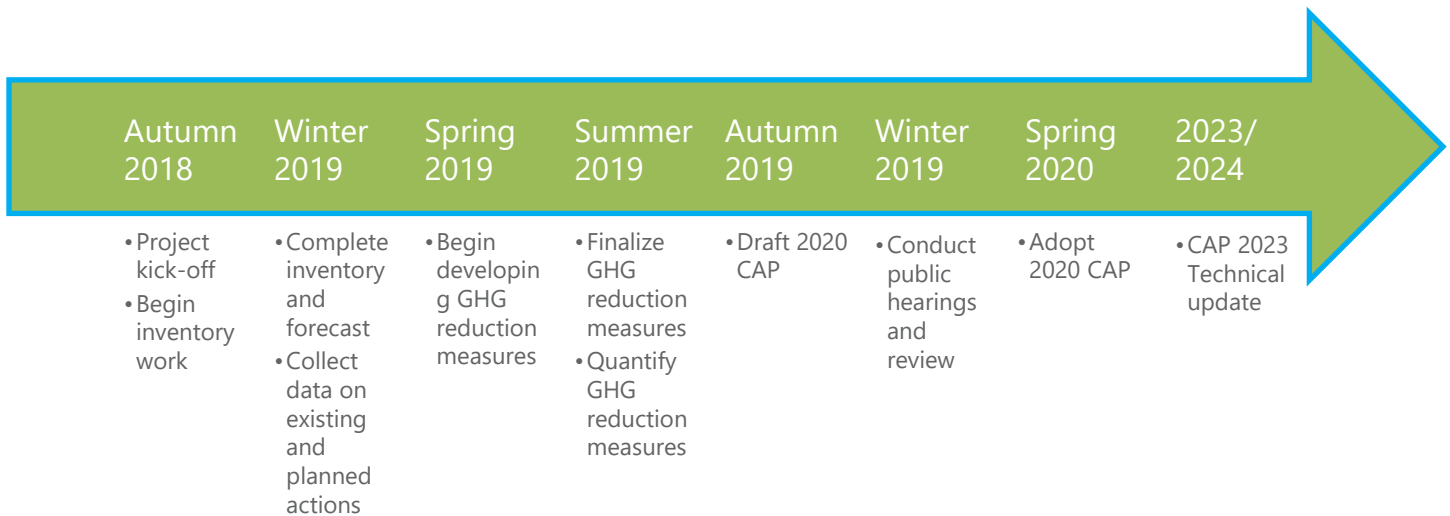
The City prepared the CAP as a collaborative effort between City staff, City officials, members of the public, and agency partners. San Mateo's existing GHG accomplishments is a core foundation of the CAP. From 2005 to 2019, San Mateo achieved a 22 percent decrease in GHG emissions. Programs such as Peninsula Clean Energy, composting and other waste reduction efforts, increased adoption of electric and more fuel-efficient vehicles, and improved energy efficiency and water conservation have all helped to achieve this reduction and will continue to reduce GHG emissions far into the future. By 2045, these local efforts are expected to reduce San Mateo's GHG emission levels over 25 percent below where they would be without these actions.

Starting with these existing efforts, City staff and community members identified opportunities for new and expanded GHG reduction programs in San Mateo, touching on all major sources of GHG emissions in the community and leveraging new opportunities for GHG reductions that were not available when the City was preparing the 2015 CAP. Through conversations with other City staff members, a public open house meeting, and discussions with the Sustainability and Infrastructure Commission, the project team revised this list to produce a final list of GHG reduction measures and the volume of reductions they enable. The CAP allows San Mateo to meet and, in some instances, exceed the state-recommended targets for local communities. This CAP also includes an implementation and monitoring work plan for City staff to put these measures into effect and to track their effectiveness.

Figure **ES-1** shows the timeline for the 2020 CAP.

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Figure ES-1:CAP Timeline



## KEY OUTCOMES OF THE CAP

The CAP includes two major sets of technical analyses. The first is an inventory of San Mateo's recent GHG emissions and a forecast of how these emissions may change in the future. The second is a set of calculations (known as quantification) showing how the CAP measures, as well as existing and planned efforts, can reduce GHG emissions consistent with the City's targets.

## Community GHG Inventories

GHG inventories are assessments of San Mateo's GHG emissions from a variety of sources over the course of a calendar year. San Mateo has several previous GHG inventories, including ones for the calendar years 2005, 2010, 2015, and 2017. As part of the 2023 technical update to the CAP, the project team prepared a fifth inventory, for the calendar year 2019. The project team chose to prepare a 2019 GHG inventory as opposed to a 2020 GHG inventory so that the impact of the COVID-19 pandemic and shelter-in-place orders would not skew the data. The project team made limited updates to the previous year inventories to use the same methods and data sources as the 2019 inventory, informed by State guidance and best practices. This ensures that all five inventories are consistent and provide an accurate assessment of how San Mateo's GHG emissions have changed over time.

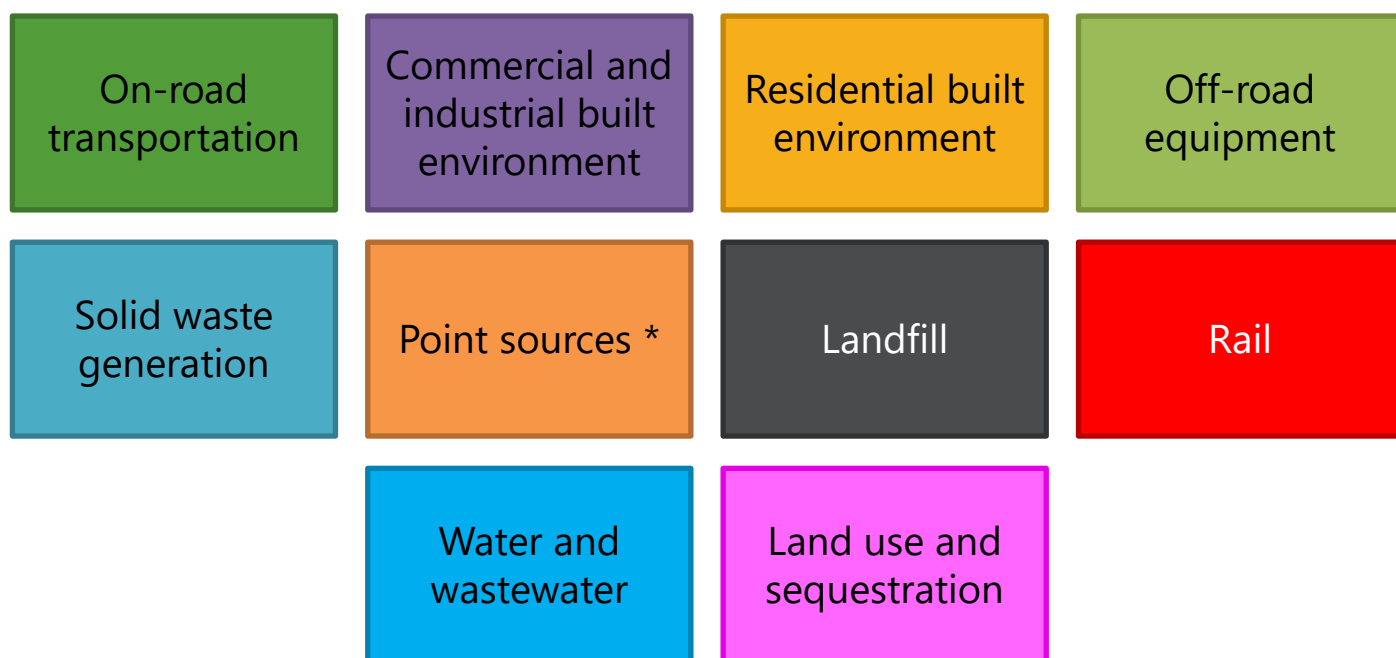


# EXECUTIVE SUMMARY

San Mateo's GHG emissions are caused by activities that take place within the city limits, even if the emissions are physically emitted elsewhere. For example, GHG emissions caused by the decomposition of trash thrown away in San Mateo are counted in these inventories, even though the decomposition (and resulting emission of GHGs) occurs in a landfill that is not located in San Mateo. All measurements of GHG emissions are in the common unit of metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e), which allows for the different strengths of various GHGs to be expressed in a single unit.

**Figure ES-2** shows the 10 sources (sectors) of GHG emissions included in the inventories in this CAP.

**Figure ES-2: GHG Inventory Sectors**



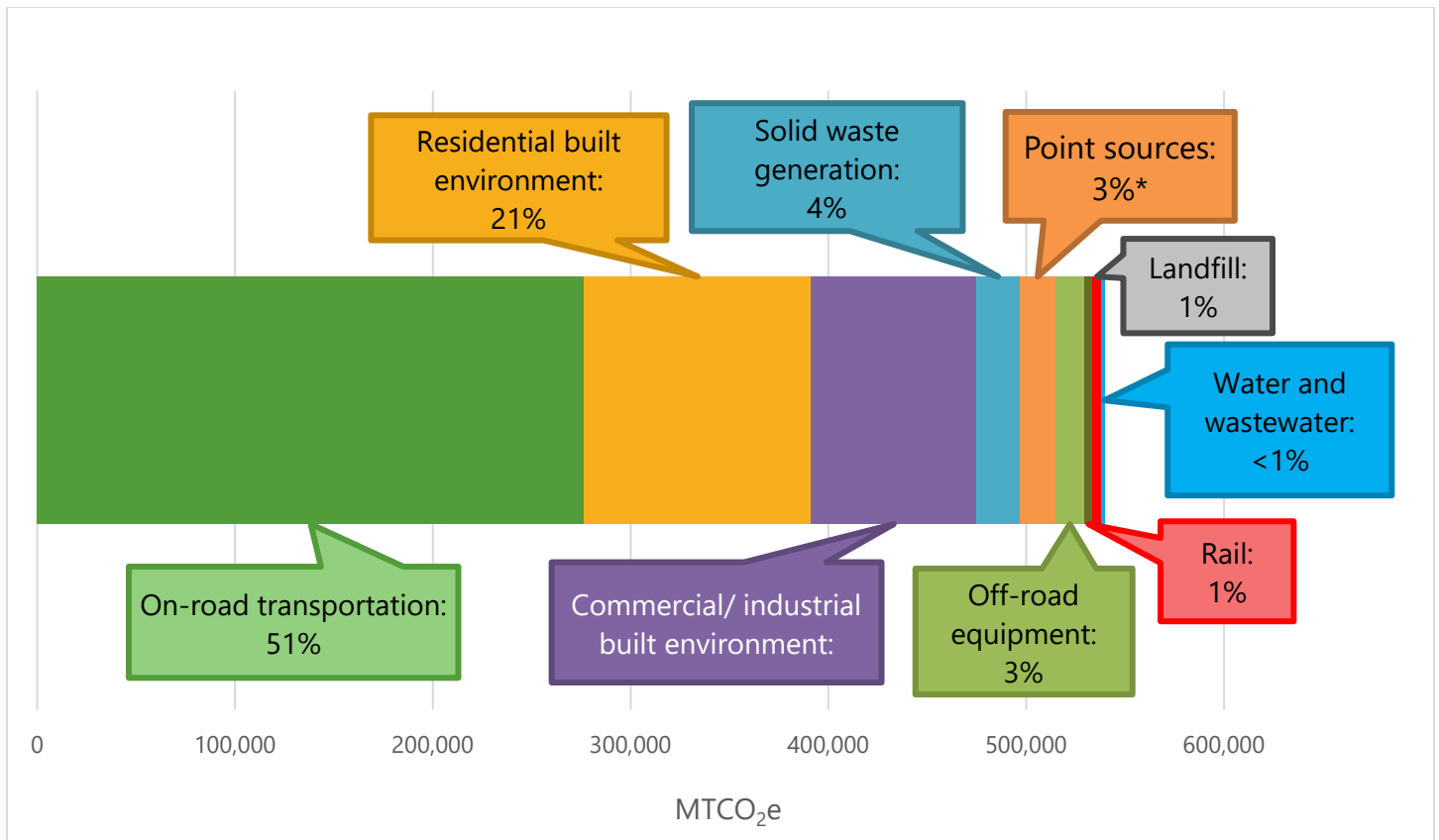
*\* Informational item, not included in the total of San Mateo's emissions.*

In 2005, San Mateo's GHG emissions totaled 666,410 MTCO<sub>2</sub>e. These emissions fell to 651,450 MTCO<sub>2</sub>e in 2010, 592,010 MTCO<sub>2</sub>e in 2015, 533,730 MTCO<sub>2</sub>e in 2017, and 520,410 MTCO<sub>2</sub>e in 2019, a decline of 2 percent, 11 percent, 20 percent, and 22 percent relative to 2005 levels respectively. In all years, the on-road transportation sector is the largest source of emissions, followed by emissions from the two built environment sectors, off-road equipment, solid waste generation, and point sources. Landfill, rail, and water and wastewater emissions were

# EXECUTIVE SUMMARY

consistently the smallest sources. This CAP uses 2019 as the current year GHG inventory to present normal conditions, as the protocols suggest. Use of data from 2020 would represent an anomalous year as several sectors were impacted by the COVID-19 pandemic and related changes to day-to-day activities resulting from precautions and restrictions. **Figure ES-3** shows emissions by sector for 2019.

**Figure ES-3: 2019 GHG Emissions**



\* Point sources are included as an informational item and are not counted towards the total GHG emissions for the City.

# EXECUTIVE SUMMARY

## Forecast

The forecast is a projection of future GHG emissions, showing how these emissions would change over time if no action is taken at the federal, State, or local level to reduce them. In the forecast, changes in emissions are caused by changes in population. As San Mateo is expected to continue to grow through 2045, the forecast projects an increase in emissions. The CAP projects emissions to grow to 605,240 MTCO<sub>2</sub>e by 2030, 696,810 MTCO<sub>2</sub>e by 2040, and 750,400 MTCO<sub>2</sub>e by 2045 if no action is taken, a total increase of 44 percent from 2019 levels.

## Targets

The CAP sets substantial GHG reduction goals for San Mateo, consistent with the City's role as a sustainability leader. The CAP relies on the recommended GHG reduction goals in the State's Climate Change Scoping Plan to set targets for GHG reductions and support a path to achieving carbon neutrality by 2045, adapted to ensure that they are appropriate for San Mateo and meet the CEQA requirements for community-wide plans as well as individual development projects. These targets are:

- 2030: Reduce emissions to 40 percent below 1990 levels (49 percent below baseline 2005 levels), equal to 339,880 MTCO<sub>2</sub>e.
- 2045: Reduce emissions to 85 percent below 1990 levels (87 percent below baseline 2005 levels), equal to 84,970 MTCO<sub>2</sub>e.

## Existing and Planned Accomplishments

The forecast represents a "worst case" scenario if no action is taken to reduce GHG emissions. However, San Mateo, along with regional and State agencies, have already taken actions to reduce GHG emissions below their 2019 limit and to close the gap to the City's GHG reduction targets. The CAP identifies the GHG reductions from these existing and planned accomplishments. **Table ES-1** shows the reductions from these accomplishments and San Mateo's projected future emissions affect taking these accomplishments into account.



# EXECUTIVE SUMMARY

**Table ES-1: Reductions from Existing and Planned Accomplishments**

	2030	2040	2045
Forecasted Emissions	605,420 MTCO <sub>2</sub> e	696,810 MTCO <sub>2</sub> e	750,400 MTCO <sub>2</sub> e
Reductions from State existing and planned accomplishments	-72,900 MTCO <sub>2</sub> e	-147,970 MTCO <sub>2</sub> e	-196,140 MTCO <sub>2</sub> e
Reductions from local and regional existing and planned accomplishments	-23,980 MTCO <sub>2</sub> e	-18,360 MTCO <sub>2</sub> e	-4,950 MTCO <sub>2</sub> e
Emissions with existing and planned accomplishments	508,380 MTCO <sub>2</sub> e	530,510 MTCO <sub>2</sub> e	549,320 MTCO <sub>2</sub> e

## Reduction Measures

This CAP builds on the GHG reduction measures in the 2015 CAP, as well as the existing and planned accomplishments, to provide an updated suite of GHG reduction measures that meet the City's targets. These measures are informed by several sources, including discussions with City staff, feedback from public engagement efforts, and direction from the Sustainability and Infrastructure Commission. This CAP contains 29 GHG reduction measures, all of which also provide additional community benefits such as financial savings and improvements to public health. **Table ES-2** shows these measures and the GHG reductions they allow.

# EXECUTIVE SUMMARY

**Table ES-2: Reductions by Measure**

Measure	2030	2040	2045
BE 1: All-electric new construction	-21,070	-38,450	-47,250
BE 2: All-electric existing buildings	-102,210	-184,610	-221,260
RE 1: Peninsula Clean Energy	-160	-170	0
RE 2: Renewable energy systems for new and existing residences	-70	-160	0
RE 3: Renewable energy systems for new and existing nonresidential buildings	-60	-90	0
EE 1: Residential energy efficiency retrofits	-6,160	-7,020	-6,790
EE 2: Nonresidential energy efficiency retrofits	-3,800	-8,860	-13,380
EE 3: Residential tree planting	Less than -10	Less than -10	0
ME 1: Energy efficiency for new municipal buildings	Supportive (no measurable GHG reductions)		
ME 2: Energy efficiency at existing municipal buildings	-10	-30	-40
ME 3: All-electric municipal buildings	-130	-200	-270
CF 1: Electric vehicle charging infrastructure	-24,420	-49,390	-69,780
CF 2: Electric vehicle education and outreach	-4,910	-8,030	-12,360
CF 3: Clean city fleet	-130	-200	-270
CF 4: Clean fuel and vehicle emissions	-4,210	-16,920	-26,360
ST 1: Bicycle mode share	-80	-170	-180
ST 2: Pedestrian mode share	-110	-120	-130
ST 3: Micromobility and shared mobility	Supportive (no measurable GHG reductions)		
ST 4: Public transit service	-3,610	-5,660	-6,910
ST 5: Commuter programs	Less than -10	-70	-160
ST 6: Transportation Demand Management	-2,010	-7,950	-13,410
ST 7: Transit-oriented development	-10,200	-18,920	-23,700

# EXECUTIVE SUMMARY

Measure	2030	2040	2045
SW 1: Composting program	-1,030	-1,710	-1,850
SW 2: Expanded recycling service	-6,070	-7,730	-8,820
SW 3: Waste awareness and source reduction	-2,080	-4,050	-5,590
WW 1: Water efficiency retrofits for existing buildings	-170	-300	-360
WW 2: Water-efficient landscaping	Less than -10	-10	0
WW 3: Water efficiency in new construction	Less than -10	-10	-20
OR 1: Alternative fuel lawn and garden equipment	-3,660	-7,130	-9,890
<b>Total</b>	<b>-196,360</b>	<b>-367,960</b>	<b>-468,780</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

When the CAP is fully implemented, it is projected to reduce GHG emissions to meet or exceed San Mateo's reduction targets:

- Projected 2030 emissions with the CAP are 311,990 MTCO<sub>2</sub>e, below the reduction target of 339,880 MTCO<sub>2</sub>e.
- Projected 2045 emissions with the CAP are 80,550 MTCO<sub>2</sub>e, below the City's reduction target of 84,970 MTCO<sub>2</sub>e



# EXECUTIVE SUMMARY

## Implementation

Successfully achieving these GHG reductions depends on effective implementation of the CAP. The CAP includes a work plan to help identify the lead City department(s), timeframe, and estimated staff time for each of the GHG reduction measures, which will help prioritize the measures and identify a work program. City staff will monitor implementation of the CAP, report annually on CAP implementation, and will revise the work program as needed to ensure the best use of City and community resources. This approach will help ensure that San Mateo stays on track to meet or exceed its GHG reduction targets and will make it easier to update the CAP in future years, as necessary.



New and emerging technologies, such as systems that track real-time energy use and suggest ways to improve energy efficiency, can help San Mateo continue to reduce its GHG emissions.

*Photo by Dennis Schroeder/NREL (22290)*

# EXECUTIVE SUMMARY



**Addressing climate change will help provide numerous benefits to San Mateo community residents, including supporting the conservation of San Mateo's outdoor resources.**

*Photo by City of San Mateo*

# EXECUTIVE SUMMARY

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# City of San Mateo Climate Action Plan



## Chapter 1 Introduction

This Climate Action Plan (CAP) demonstrates the City of San Mateo's leadership and commitment to reduce greenhouse gas (GHG) emissions.

This CAP is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the City of San Mateo, consistent with the California Environmental Quality Act (CEQA) Guidelines Section 15183.5(b). The CAP identifies a strategy, reduction measures, and implementation actions the City will use to achieve targets consistent with State recommendations of 85 percent below 1990 emissions levels by 2045.

### GHG Reduction Targets

This CAP implements a key goal of the City's 2040 General Plan by achieving the City's adopted GHG reduction targets for 2030 and 2045, which align with State-recommended GHG reduction goals.



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## PURPOSE

The City of San Mateo first adopted a CAP in 2015, based on a long-standing commitment to environmental stewardship and sustainability. This CAP consolidated and updated multiple earlier plans, consistent with the City's 2030 General Plan, including the Sustainable Initiatives Plan (adopted in 2007), Greenhouse Gas Emissions Reduction Program (adopted in 2010), and the Climate Action Plan for Operations and Facilities (adopted in 2008). Regionally, the 2015 CAP drew on the City's involvement with countywide climate action planning efforts. The 2015 CAP integrated early and ongoing efforts into a single plan that supported the General Plan and followed CEQA and air quality guidelines set by the State and BAAQMD.

The 2015 CAP recommended that the document be updated at least once every five years to address emerging issues and changing best practices related to GHG emissions, including new regulations, the availability of new technologies, and changes to development patterns. The City completed an update to the CAP in 2020 and again in 2023. This CAP preserves the structure and format of the 2015 document while providing updated information, an expanded set of GHG reduction measures, a longer-term planning horizon, and alignment with the goals of the Strive San Mateo General Plan 2040. As a result, this CAP provides a revised framework for addressing GHG emissions in the community, including an updated consolidated framework for the review and analysis of GHG emissions from new development activities.

Although the CAP was recently updated and adopted, the City's update to the Strive San Mateo General Plan 2040 and new State laws necessitate a technical update to the CAP so that the CAP will maintain consistency with the Strive San Mateo General Plan 2040 when adopted and can continue to serve as a qualified GHG reduction strategy.

Since the City's adoption of the CAP in 2020, the State of California has accelerated its actions and commitments to reduce statewide GHG emissions with the passage of Assembly Bill (AB) 1279 codifying the State's commitment to be carbon neutral by 2045. As part of this commitment to carbon neutrality, AB 1279 directs a minimum statewide reduction of GHGs to at least 85 percent below 1990 levels by 2045. In addition to State targets, the CAP and General Plan must follow regional air district guidance and thresholds to serve as the City's qualified GHG reduction strategy. In April 2022, the Bay Area Air Quality Management District (BAAQMD) approved new thresholds of significance to determine whether a proposed project, including general plans and CAPs, will have a significant impact on climate change. BAAQMD strongly recommends that cities and counties adopt a CAP that has been prepared consistent with CEQA Guidelines Section 15183.5(b) to demonstrate their ability to meet the State's GHG reduction goals for 2030 and 2045. In response to these changes, the City completed a technical update to the 2020 CAP in 2023 so that it is consistent with Strive San Mateo General Plan 2040 and continues

Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.  
– IPCC Fifth Assessment Report

to serve as the City's qualified GHG reduction strategy, as it has since 2015. The approach for this technical update is consistent with the BAAQMD guidance available.

The CAP allows City decision makers and the community to understand the sources and magnitude of local GHG emissions, establish goals to reduce GHG emissions, and prioritize steps to achieve emissions reduction targets. The CAP updates and expands the City's goals, measures, and actions to reduce community-wide GHG emissions. It also revises San Mateo's implementation program and framework to monitor and report progress.

## CLIMATE CHANGE SCIENCE

To make meaningful and effective decisions regarding GHG emissions reductions, it is important to understand the scientific and regulatory framework under which this Plan has been developed. This section provides a brief introduction to the scientific research efforts to understand how climate change occurs and its global implications, and describes the federal, State, regional, and local regulations that provide guidance and inform the development of this Plan.

Since the early 1990s, scientific consensus holds that the world's population is releasing GHGs faster than the earth's natural systems can absorb them. These gases are released as byproducts of fossil fuel combustion, waste disposal, industrial processes, land-use changes, and other human activities. While often used interchangeably, there is a difference between the terms "climate change" and "global warming." According to the National Academy of Sciences, climate change refers to any significant, measurable change of climate lasting for an extended period that can be caused by both natural factors and human activities. Global warming, on the other hand, is an average increase in the temperature of the atmosphere caused by increased GHG emissions. The use of the term "climate change" is more accurate because it encompasses all changes to climate, not just temperature.

## Greenhouse Effect

The release of gases, such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), creates a blanket around the earth that allows light to pass through but traps heat at the surface preventing its escape into space (**Figure 1**). These gases function similarly to the glass panes of a greenhouse, which allow sunlight to pass into the building but trap heat inside, hence the name for this process: the greenhouse effect. While the greenhouse effect is a naturally occurring process that is vital for the existence of life, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of the gases that cause this effect, known as greenhouse gases, in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

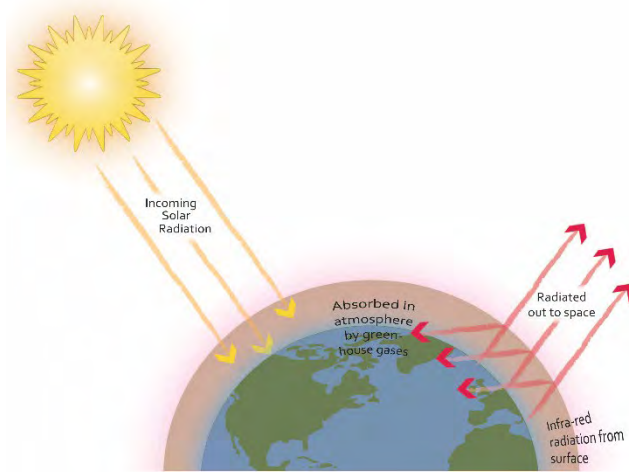


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## Climate Change Impacts

The continued release of GHGs at or above the current rate will continue to increase average temperatures around the globe. These increases in global temperatures are likely to change our planet's climate in ways that will have significant global, regional, and local long-term effects.

**Figure 1: The Greenhouse Effect**



Source: National Oceanic and Atmospheric Administration, National Climatic Data Center. 2008. NOAA Satellite and Information Service.

## Global Climate Change Impacts

The Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report summarizes the most recent scientific understanding of global climate change and projects future conditions using the most comprehensive set of recognized global climate models. The report, released in 2013, considers all impacts human activities have on global temperature, and states that there is at least a 95 percent probability that "human influence has been the dominant cause of the observed warming since the mid-20<sup>th</sup> century." The Fifth Assessment Report projects four different temperature scenarios, all of which project 2016–2035 temperatures 0.54 to 1.26°F warmer than the 1986–2005 average temperature, and potentially over 7.2°F by 2100 under the most aggressive scenario.

It is extremely likely [at least a 95% probability] that human influence has been the dominant cause of the observed warming since the mid-20th century.  
– IPCC Fifth Assessment Report

As asserted in the IPCC Fifth Assessment Report and other scientific studies, if trends remain unchanged, continued GHG emissions above current rates will induce further warming changes in the global climate system and pose even greater risks than those currently witnessed. **Figure 2** shows the effects of additional warming on global temperatures. Given the scientific basis of climate change and expected trends, the challenge remains to prepare for and mitigate climate change through deliberate global and local action.

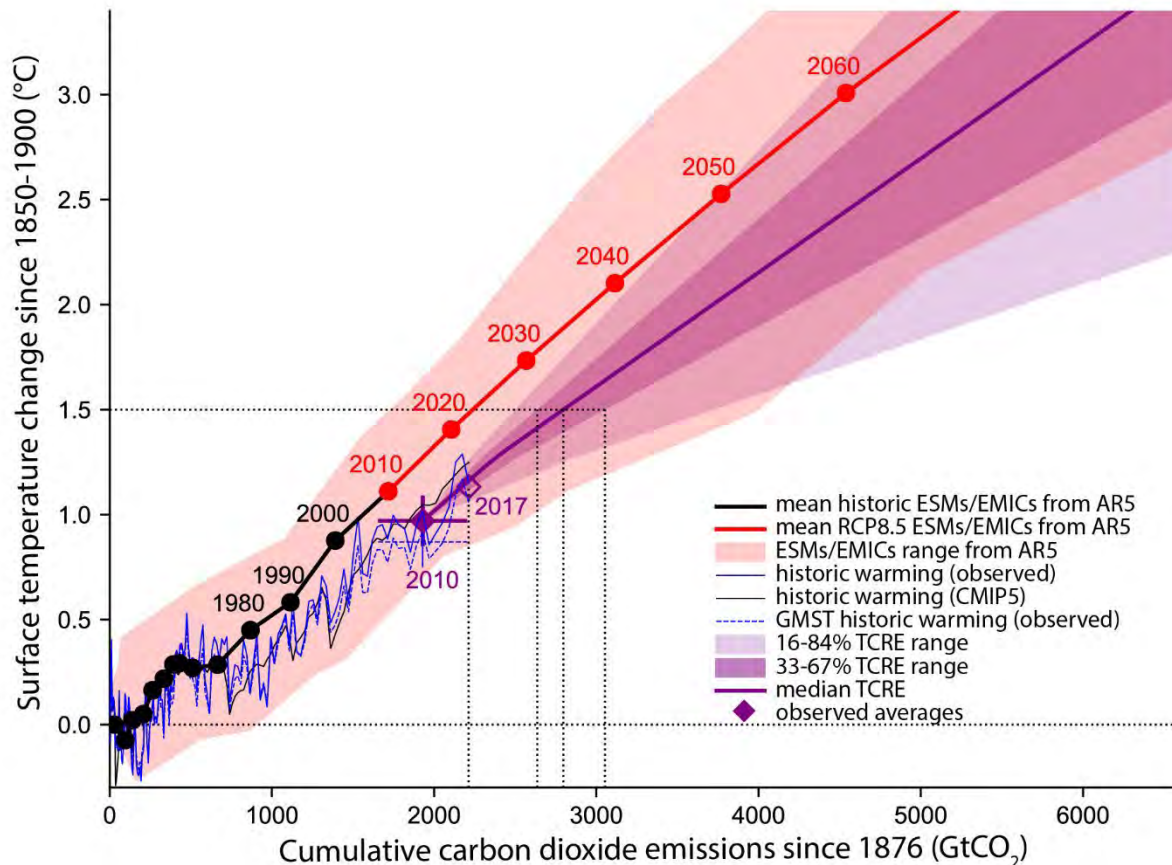
## Emission Scenarios

The future severity of climate change depends on future GHG emission trends worldwide. If GHG emissions drop quickly and significantly, scientists project that there will be fewer substantial changes in future climate conditions. If emissions continue to increase, or only decline slowly and in the more distant future, severe climate change is more likely. These emission trends depend on political actions, economic conditions, individual behavior, and many other factors.

The global scientific community commonly uses four scenarios, called Representative Concentration Pathways (RCPs). In California, the best available data is for two of these scenarios: RCP 4.5 (a medium-low emissions scenario) and RCP 8.5 (a high emissions scenario). For the sake of a conservative analysis that identifies the greatest potential range of climate change effects, this section presents results of the RCP 8.5 scenario.

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Figure 2: Potential Global Temperature Increases



Historic and potential future global temperatures, depending on different levels of future GHG emissions. The red line shows the expected temperature trend without significant worldwide action to reduce GHG emissions

Source: Intergovernmental Panel on Climate Change, 2019

## Climate Change Impacts to California and the City of San Mateo

The City of San Mateo, like most communities in California, is expected to experience multiple direct impacts as a result of climate change, including potential flooding, sea level rise, wildfires, drought, extreme heat, and negative effects on public health and biodiversity. Research suggests that California will experience hotter and drier conditions, reductions in winter snow and increases in winter rains, sea level rise, significant changes to the water cycle, and an increased occurrence of extreme weather events. Such compounded impacts will affect transportation networks, water supplies, and economic systems throughout the state, with likely ramifications in the City of San Mateo. To refrain from action is costly and risky; the California Fourth Climate Change Assessment



estimates that no action to address the potential impacts of climate change will lead to economic losses of “tens of billions of dollars per year in direct costs” and “expose trillions of dollars of assets to collateral risk.” **Table 1** summarizes potential impacts in California due to climate change.

**Table 1: California Climate Change Impacts**

Climate Impact	Historical Trends	Future Direction of Change	Confidence for Future Change
Temperature	Warming	Warming	Very High
Sea Level Rise	Rising	Rising	Very High
Snowpack	Declining	Declining	Very High
Annual Precipitation	No Significant Trends	Unknown	Low
Intensity of Heavy Precipitation Events	No Significant Trends	Increasing	Medium-High
Frequency of Droughts	No Significant Trends	Increasing	Medium-High
Frequency and Intensity of Santa Ana Winds	No Significant Trends	Unknown	Low
Marine Layer Clouds	Some Downward Trends	Unknown	Low
Acres Burned by Wildfire	Increasing	Increasing	Medium-High

*Source: Bedsworth, Louise, Dan Cayan, Guido Franco, Leah Fisher, Sonya Ziaja. (California Governor’s Office of Planning and Research, Scripps Institution of Oceanography, California Energy Commission, California Public Utilities Commission). 2018. Statewide Summary Report. California’s Fourth Climate Change Assessment. Publication number: SUMCCCA4-2018-013.*

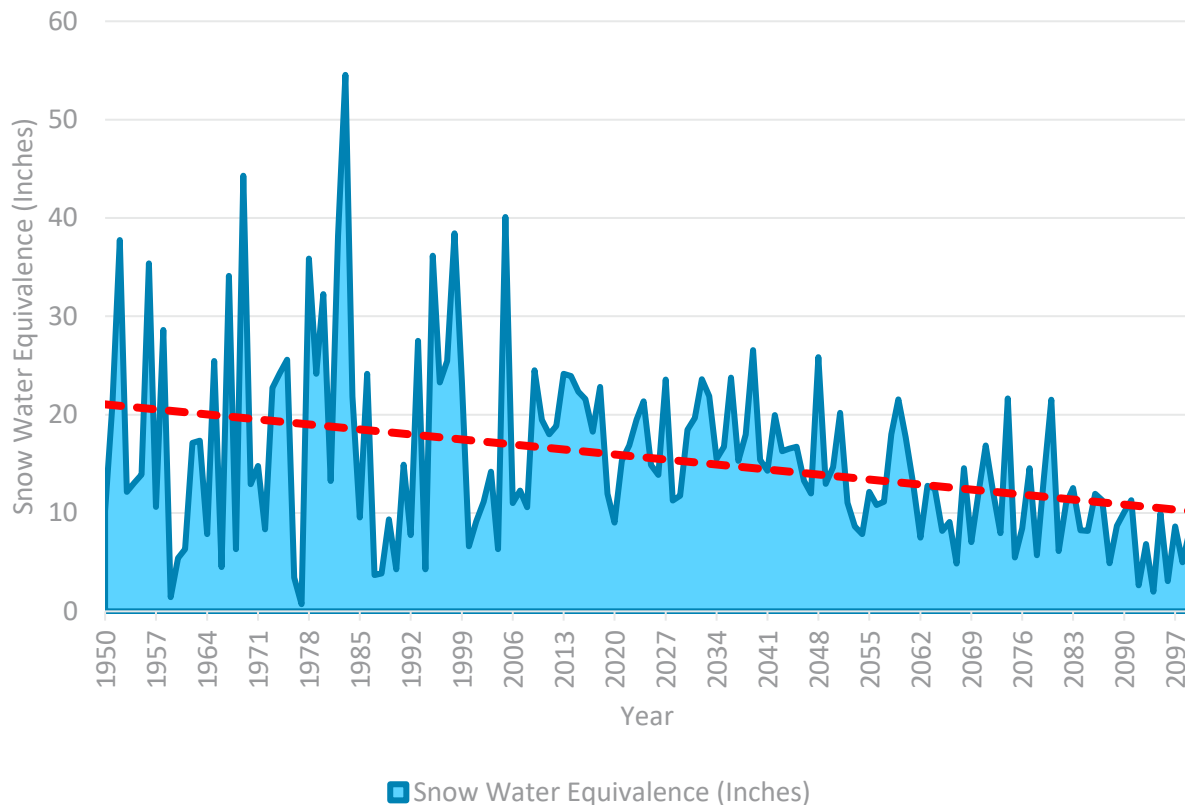
## Decreased Supply of Fresh Water

The State’s water supply is already under stress and is anticipated to shrink under even the most conservative climate change scenario. Warmer average global temperatures cause more precipitation to fall as rain instead of snow, making the winter snowfall season shorter and accelerating the rate at which the snowpack melts in the spring. The Sierra snowpack is estimated to decline by at more than two-thirds below its historical average by 2050. **Figure 3** shows anticipated changes in snowpack levels above the Hetch Hetchy reservoir watershed, the source of most of the water used in San Mateo, under a high GHG emissions scenario. With rain and snow events becoming less predictable and more variable, the rate of flooding could increase beyond what is currently considered flood-prone, and California’s ability to store and transport fresh water for consumption could decrease. Further, warmer weather will lead to longer growing seasons and increased agricultural demand for

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water throughout the state, as well as an increase in the prevalence of ticks, mosquitos, and other vectors for harmful diseases.

**Figure 3: Historic and Projected Snowpack Levels Impacting San Mateo’s Water Supply**



Source: Cal-Adapt 2019.

## Increased Severity and Frequency of Flood Events

Forecasts indicate more intense rainfall events, generating more frequent or extensive runoff, and flooding that may result from a changing climate. According to Cal-Adapt, these intense rainfall events historically occurred an average of 11 times per year and are projected to increase to an average of 13 times per year by 2050 and an average of 16 times by 2100. Localized flood events may increase in periods of heavy rain. As explained by the California Fourth Climate Change Assessment, California’s water system is structured and operated to balance between water storage for dry months and flood protection during rainy seasons. Although climate change is likely to lead to a drier climate overall, risks from regular, more intense rainfall events can generate more frequent and/or more severe flooding that upsets this managed balance between storage and protection. Areas along creeks, including Laurel Creek and San Mateo Creek, and east of El Camino Real are at a higher risk of flooding.

Climate change may increase the frequency and severity of storms and expand the parts of the city that are considered prone to flooding. Additionally, erosion may increase, and water quality may decrease because of increased rainfall amounts.

## Rising Sea Levels

Sea level rise is attributed to the increase of average ocean temperatures and the resulting thermal expansion and the melting of snow and ice contributing to the volume of water held in the oceans. While many effects of climate change will impact the region, sea level rise is one specific impact that has been extensively studied and quantified, and its effects mapped. The speed and amount of sea level rise will be influenced by the increase in average temperatures and rate of melting of glacial ice. While there is a degree of uncertainty in projections, the actual rate of sea level rise is occurring more quickly than many previous projections had estimated.



**Shoreline areas of San Mateo, such as Ryder Park, may be vulnerable to sea level rise.**

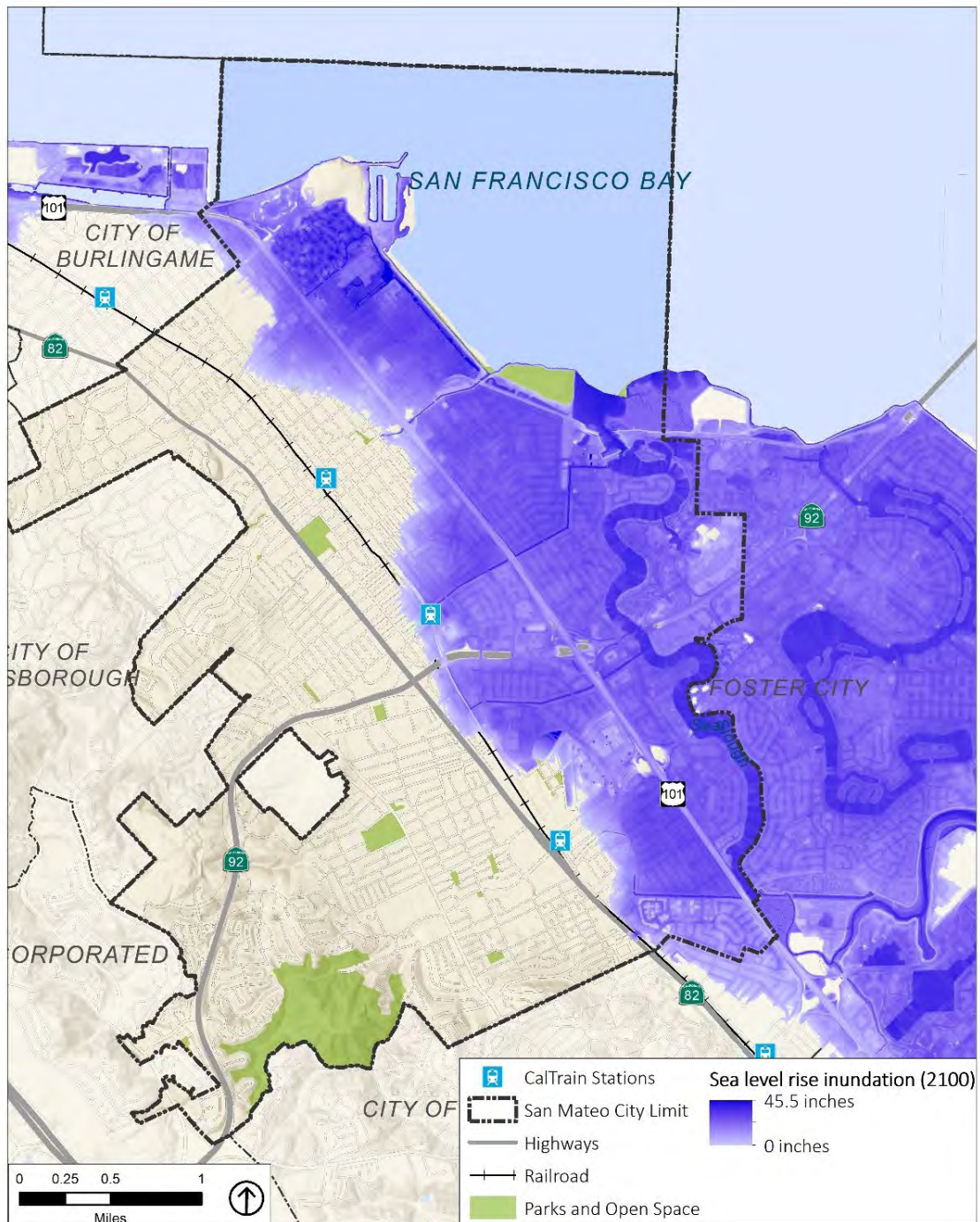
*Photo by City of San Mateo*

The California Natural Resources Agency, in partnership with the California Ocean Protection Council, issued a 2018 update to the State of California Sea-Level Rise Guidance, which states that sea levels in the San Francisco Bay Area may rise between 1.1 and 2.7 feet by mid-century and between 3.4 and 10.2 feet by the end of the century. Because it is in a low-lying coastal area, San Mateo is highly vulnerable to this threat. A sea level rise of 2 feet could inundate areas near Seal Point. If the level of San Francisco Bay rises 7 feet, water is projected to inundate all parts of San Mateo east of Highway 101, the area north of downtown, and large sections of the Hayward Park, Bay Meadows, and Laurie Meadows neighborhoods. Rising sea levels also threaten a significant portion of San Mateo's housing, commercial buildings, essential infrastructure, and economic drivers, as low-lying land near the shoreline could be subject to more frequent flooding. Affected essential infrastructure includes US Highway 101, State Route (SR-) 92, and the Caltrain station and associated railroad infrastructure. Meanwhile, rising tides may increase groundwater levels, inundating contaminated soils. Given that some contaminated sites in San Mateo sit near the shoreline, rising groundwater may cause contaminated soils to leach into new, different areas. **Figure 4** shows the parts of San Mateo that are expected to be inundated by sea level rise by 2100.



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Figure 4: Sea Level Rise in San Mateo (2100)



Source: Adapting to Rising Tides 2019, City of San Mateo 2019, San Mateo County 2019, ESRI 2019, PlaceWorks 2019

## **Deteriorating Public Health**

Heat waves are expected to have a major impact on public health, as well as decreasing air quality and increasing mosquito breeding and mosquito-borne diseases. Further, climate change is expected to alter the spread and prevalence of disease-carrying insects, organisms, or people, referred to as vectors, in addition to leading to a possible decrease in food quality and security. Vector control districts throughout the State are already evaluating how they will address the expected changes to California's climate.

According to a report from the California Air Resources Board (CARB), the warming climate will increase ozone levels in California's major air basins, leading to upwards of 6 to 30 more days per year with ozone concentrations that exceed federal clean-air standards. The number of extreme heat days per year (when the daily average temperature exceeds 90 degrees) is also projected to double from mid-century to the end of the century.

Cost-effective measures to reduce GHG emissions and protect public health are important for local governments. The new CARB study provides evidence of what is becoming known as the "climate penalty," where rising temperatures increase ground-level ozone and airborne health-damaging particles, despite the reductions achieved by programs targeting smog-forming emissions from cars, trucks, and industrial sources. The elderly, young, and sensitive populations most likely to be impacted by climate change are also those that often lack sufficient resources to adapt. Such vulnerable demographics are likely to need assistance to respond to climate change. Social equity issues related to the unequal distribution of resources and increased costs to address community-wide health risks will need to be addressed proactively to reduce the potential for financial strain on local governments.

## **Increased Rate of Wildfires**

Wildfire risk is based on a combination of factors including rainfall, winds, temperature, and vegetation. According to California Fourth Climate Change Assessment, higher temperatures, longer dry periods, and increased frequency of high velocity winds over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Historically, the annual average area burned in San Mateo was 50 acres. According to Cal-Adapt, under a higher emissions scenario, this could increase to an average annual burn area of 120 acres by 2050 and 132 acres by 2100. The hills behind San Mateo, east of Interstate (I-) 280, are also expected to see an increase in wildfire frequency, and fires in this area could cause damage in the community or impact local air quality.

## **Negative Impacts on Wildlife**

As temperatures rise, species are migrating north in California or to higher elevations. This ecological shift disrupts the food chain and prevents some plant species from being pollinated. Water and food supplies are expected to be more variable and to shift as the seasons change. The California Office of Emergency Services and the California Natural Resources Agency note that those species that are unable to migrate face the danger

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of extinction: “The amount of future warming expected in California may likely exceed the tolerance of endemic species (i.e., those that are native to a specific location and that only occur there) given their limited distribution and microclimate.”

Reduction in soil moisture will result in early dieback of many plants, potentially leading to conflicts with animal breeding seasons and other natural processes. Many of the potential effects on wildlife are still being studied, but with a limited ability to adapt to new climates and the expected success of invasive species, pests, and pathogens in future climate conditions, there is a potential for severe species loss.

Several potential hydrological changes associated with global climate change could also specifically influence the ecology of aquatic life in California and have several negative effects on cold-water fish. For example, if a rise in air temperature by just a few degrees Fahrenheit occurs, this change could be enough to raise the water temperatures above the tolerance of salmon and trout in many streams, favoring instead non-native fishes such as sunfish and carp. Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults or juveniles or both. Additionally, oak woodlands, a habitat found in San Mateo, is vulnerable to climate stressors that alter water availability or soil temperature.

## LOCAL CONTEXT

The CAP has been an implementation program of the City’s 2030 General Plan. The City of San Mateo adopted the 2030 General Plan in 2010. As part of the General Plan update, the City prepared and adopted the 2010 Greenhouse Gas Emissions Reduction Program (Program). The 2010 Program was the City’s first step to consolidate City efforts into a framework for reducing GHG emissions consistent with the California Global Warming Solutions Act. The 2010 Program was based on the City’s Sustainable Initiatives Plan adopted in the early stages of the 2030 General Plan update. The City revised its approach four years later by developing the 2015 CAP, in response to evolving guidance and new protocols. This CAP supersedes the 2015 document.

## 2030 and 2040 General Plan

The 2030 San Mateo General Plan presents the City’s vision for establishing San Mateo as a diverse community with an exceptional quality and character. The General Plan envisions a preeminent City with balanced commercial and residential growth, with a distinguished downtown and viable, wholesome neighborhoods driven by a solid, healthy economic and financial base.

The City’s General Plan contains goals and policies which regulate urban development, the protection of the natural environment, and public safety. It reflects the community’s long-term vision and provides a goal and policy framework to guide land use and planning-related decisions, and future funding decisions. The General Plan also enables citizens and those seeking to develop property to understand San Mateo’s values and



objectives. The General Plan also establishes the City's vision of serving as a leader in addressing the environmental effects of climate change with education, promotion, and fostering sustainable development.

The General Plan establishes a set of GHG reduction goals and directs the City to reduce emissions to achieve these goals by developing a comprehensive GHG reduction strategy. The Sustainable Initiatives Plan initially fulfilled this role, followed by the 2015 CAP. This CAP will serve as the new GHG reduction strategy for San Mateo.

The City and community members are currently updating San Mateo's General Plan and will replace it with the community's 2040 General Plan called Strive San Mateo General Plan 2040. This process began in 2018 and the Strive San Mateo General Plan 2040 is set to be adopted in 2024. Future updates to the CAP will reflect any new policies or visions in Strive San Mateo General Plan 2040.

## Sustainable Initiatives Plan

Adopted in 2007, the Sustainable Initiatives Plan was prepared by the City's Sustainability Advisory Committee to the City Council, which was an ad hoc committee created for the sole purpose of developing the plan and has since been disbanded. The Sustainable Initiatives Plan provided the City's overall commitment and framework for reducing GHG emissions and achieving sustainability. This document established the City's first GHG emissions target of reducing emissions below 1990 levels by 2020 and to 80 percent below 1990 levels by 2050, consistent with State-adopted targets and goals at that time. Strategies in the Sustainable Initiatives Plan included a commitment to incorporate sustainability into policies and foster GHG reductions throughout the community. Community strategies suggested in the Sustainable Initiatives Plan addressed a broad array of issues, from increasing bicycle and pedestrian mode share to facilitating energy efficiency and renewable energy throughout the community. The City implemented the Sustainable Initiatives Plan and its companion GHG Reduction Program (presented below), monitored progress, and presented annual updates on this document to the City Council.

## 2010 Greenhouse Gas Emissions Reduction Program

As part of the City's General Plan update in 2010, the City prepared the 2010 Program. Adopted as an appendix to the General Plan and General Plan Environmental Impact Report (EIR), the Program supported the General Plan with an analysis of GHG emissions. Building on the 2007 Sustainable Initiatives Plan, the Program quantified strategies in the Sustainable Initiatives Plan for anticipated impacts on GHG reductions. An implementation plan in the Program also identified the City's strategy to monitor GHG reductions and achieve the 2020 reduction target. Preparation of the Program included the development of a monitoring and reporting tool to track progress over time.

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The Program sought to streamline the review of new development by demonstrating consistency with BAAQMD guidance. The City fully analyzed and adopted the Program in the General Plan EIR to facilitate streamlining of new development review. Accordingly, the City used the Program to review and consider new development applications for GHG emissions.

## Climate Action Plan for Operations & Facilities

In 2008, San Mateo prepared a Climate Action Plan for Operations & Facilities, which includes a 2006 inventory of emissions from municipal operations and applies the targets identified in the Sustainable Initiatives Plan to the City. It covers emissions from energy use in City buildings, fuel use of City vehicles and equipment, commute habits of City employees, and waste thrown away at City facilities. This plan contains policies and specific capital improvements to help achieve these targets, along with recommendations for adapting to the impacts of climate change and how to educate City staff about reducing emissions. In 2010, the Climate Action Plan for Operations & Facilities was incorporated into San Mateo's General Plan as an appendix.

## 2015 Climate Action Plan

The City adopted a comprehensive CAP in 2015 that integrated San Mateo's earlier sustainability efforts into a single document. It provided an analysis of San Mateo's community-wide GHG emissions for the years 2005 and 2010, forecasted these emissions out to 2030, and established a new GHG reduction target of 35 percent below 2005 levels by 2030. This target, along with the targets of 15 percent below 2005 levels (equivalent of 1990 levels) by 2020 and 80 percent below 1990 levels by 2050, were included in the General Plan as part of the 2015 CAP adoption process. The 2015 CAP listed 28 GHG reduction measures to reduce the community's emissions, as well as a set of implementation and monitoring efforts to help put the plan into effect. This CAP is an update to the 2015 CAP.

## Regionally Integrated Climate Action Planning Suite

San Mateo has participated in the Regionally Integrated Climate Action Planning Suite (RICAPS) effort. The City/County Association of San Mateo County (C/CAG) has led this project as a countywide effort to support regional climate action planning. Originally funded by grants from BAAQMD and Pacific Gas and Electric Company (PG&E), RICAPS provides tools and a forum for ongoing countywide efforts. Tools developed through the RICAPS effort include a template of workbooks and documents available for local use. RICAPS also facilitated preparation of recent year inventories for jurisdictions in San Mateo County, including 2010, 2015, 2017, and 2019 community-wide GHG inventories for each participating jurisdiction. Jurisdictions in RICAPS continue to coordinate for a regional approach to monitoring GHG emissions and progress to local climate action planning targets.

# INTRODUCTION

While the City of San Mateo continues to participate in the RICAPS effort, the City has developed this CAP as an independent, customized CAP for the community shaped by the City's unique background and locally adopted priorities.

## REGULATORY FRAMEWORK

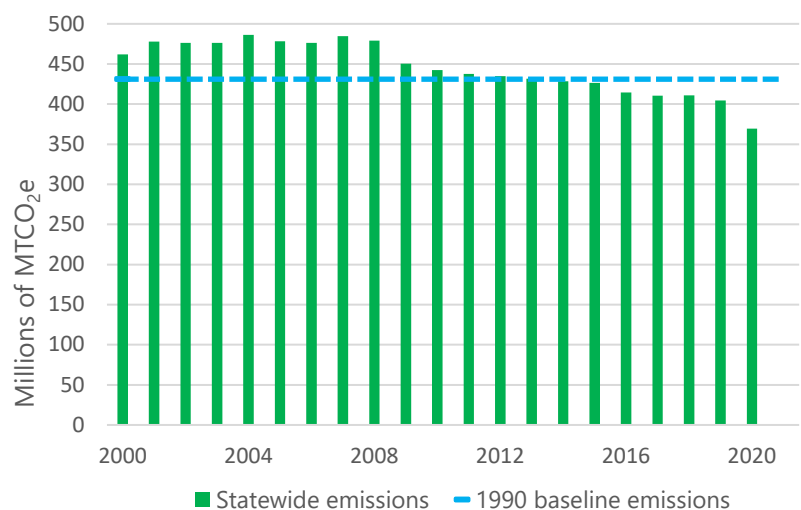
California law first addressed climate change in 1988, when AB 4420 directed the State to prepare a GHG inventory and study the impacts of climate change. Since then, California has adopted several laws to assess climate change, analyze GHG emissions and their effects, reduce emissions, and prepare for the impacts of climate change. Many of these laws and associated regulations affect local governments, although only some create specific requirements for individual communities.

### Executive Order S-03-05 and Assembly Bill 32 – California Global Warming Solutions Act of 2006

In 2005, former Governor Schwarzenegger issued Executive Order S-03-05, which established the first statewide GHG reduction goals for California: reduce emissions to 2000 levels by 2010, reduce emissions to 1990 levels by 2020, and reduce emissions 80 percent below 1990 levels by 2050.

AB 32, the California Global Warming Solutions Act, was approved by the legislature and signed by former Governor Schwarzenegger in 2006. The landmark legislation requires CARB to develop regulatory and market mechanisms that will reduce GHG emissions to 1990 levels by 2020, codifying the 2020 target in Executive Order S-03-05. AB 32 also directed CARB to identify early action items that could be quickly implemented, to develop a scoping plan to identify the most technologically feasible and cost-effective measures to achieve the 2020 target and create and adopt regulations requiring major emitters to report and verify their emissions.

The Climate Change Scoping Plan (first adopted in 2009 and then updated in 2014, 2017, and 2022) employs a variety of GHG reduction measures that include direct regulations, alternative compliance mechanisms, incentives, voluntary actions,



California's 2020 reduction goal under AB 32 is 431 million MTCO<sub>2</sub>e. In 2020, the State emitted approximately 370 million MTCO<sub>2</sub>e, reducing emissions below the State's 2020 goal.



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and market-based approaches like a cap-and-trade program. The 2022 Scoping Plan identifies local governments as strategic partners to achieving the State goal of reducing human-caused emissions to 85 percent below 1990 levels and achieving carbon neutrality by 2045. ..

## Senate Bill 375 – Sustainable Communities and Climate Protection Act of 2008

Senate Bill (SB) 375 builds off AB 32 and aims to reduce GHG emissions by linking transportation funding to land use planning. It requires metropolitan planning organizations (MPO) to create a sustainable communities strategy (SCS) in their regional transportation plans for reducing urban sprawl. Each SCS will demonstrate strategies each region will use to achieve the GHG emissions reduction target set by CARB for 2020 and 2035. In 2013, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) adopted Plan Bay Area, consisting of both the region's first SCS and 2040 Regional Transportation Plan. The plan was updated in 2017 (Plan Bay Area 2040) and 2022 (Plan Bay Area 2050).

## Executive Order B-30-15 and Senate Bill 32

In 2015, former governor Jerry Brown signed Executive Order B-30-15, which directed state agencies to take several steps to reduce statewide GHG emissions and adapt to changing climate conditions. One section of this executive order set GHG reduction goal for the state of 40 percent below 1990 levels by 2030. In 2016, SB 32 was passed, codifying this GHG reduction goal into law as an official state target.

## Executive Order B-55-18

In 2018, former governor Jerry Brown issued Executive Order B-55-18, which established an additional statewide goal of achieving carbon neutrality (no net GHG emissions) by 2045. Under this goal, any GHGs that are emitted by California must be fully offset by other activities by 2045. While this goal does not yet have the force of law, it does indicate the direction that the state is moving in and may be a reference point for future legislative action.

## Assembly Bill 1279 – California Climate Crisis Act

In 2022, the California legislature passed AB 1279, the California Climate Crisis Act, which updated the State's targets for mitigating GHGs. California must achieve net carbon neutrality for GHG emissions by 2045 and reduce emissions to at least 85 percent below 1990 levels. The 2022 update to the Scoping Plan identifies a path to achieving the AB 1279 target.

## Bay Area Air Quality Management District CEQA Air Quality Guidelines

Developing a CAP can also provide streamlined environmental review for new projects subject to CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR) to amend the State CEQA Guidelines to address GHG emissions. OPR adopted the CEQA Guidelines in December 2009, and they went into effect on March 18,

2010. The guidelines include provisions for local governments to use adopted plans for the reduction of GHG emissions to address the cumulative impacts of individual future projects on GHG emissions (see State CEQA Guidelines Section 15183.5(b) (1)).

In 2022, BAAQMD adopted the Air District's CEQA Guidelines, including *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans*. Appendix B of the Guidelines, *CEQA Thresholds for Evaluating the Significance of Climate Impacts*, presents BAAQMD's thresholds of significance for use in determining whether a proposed project will have a significant impact on climate change and provides the substantial evidence that lead agencies will need to support their use of these thresholds. The Strive San Mateo General Plan 2040 EIR will follow this guidance for the assessment of potential impacts related to buildout. Appendix C, *Guidance for Greenhouse Gas Reduction Strategies*, assists public agencies with preparation of community-wide GHG reduction strategies and CAPs. BAAQMD strongly recommends that cities and counties adopt a CAP that has been prepared consistent with State CEQA Guidelines, Section 15183.5(b), to demonstrate their ability to meet the State's GHG reduction goals for 2030 and 2045 and to be updated as needed to align with State targets and local and regional growth forecasts.

The City developed the CAP to consistent with CEQA Guidelines and BAAQMD's guidance. The 2023 technical update to the 2020 CAP and accompanying environmental review included in the Strive San Mateo General Plan 2040 EIR are consistent with the guidance set forth by BAAQMD for plan-level review of climate impacts and preparation of community-wide GHG reduction strategies (which parallel and elaborate on criteria established in State CEQA Guidelines Section 15183.5(b) (1)).

This CAP continues to meet the requirements of the CEQA Guidelines and commitments in the Land Use Element of the General Plan, as outlined below.

- Quantify emissions, both existing and projected over a specified period, resulting from activities within a defined geographic area (see **Chapter 2**).
- Establish a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable (see **Chapter 2**). This CAP identifies two targets, consistent with State guidance, that are further addressed in **Chapter 2**.
  - Reduce emissions to 40 percent below 1990 levels (49 percent below 2005 levels) by 2030.
  - Reduce emissions to 85 percent below 1990 levels (87 percent below 2005 levels) by 2045.
- Identify and analyze the emissions resulting from specific actions or categories of actions anticipated within the geographic area (see **Chapter 3** and **Chapter 4**).
- Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level (see **Chapter 4**).

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- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specific levels (see **Chapter 4**). As referenced in the General Plan Land Use Element (page LU-29-40), the City has developed a monitoring and implementation tool to track GHG emission changes over time. This CAP expands and updates the City's monitoring framework with an implementation plan, updated monitoring tool, and a checklist for new development as described in **Chapter 4** and **Appendix 3**.
- Adopt the GHG Reduction Strategy in a public process following environmental review. The 2020 CAP, as updated in 2023, is evaluated under the Strive San Mateo General Plan 2040 EIR.

## Role of the Climate Action Plan in CEQA Implementation

Consistent with the State CEQA Guidelines, lead agencies may use adopted GHG reduction plans to assess the cumulative impacts of discretionary projects on climate change. In addition, the guidelines provide a mechanism to streamline development review of future projects.

Specifically, lead agencies may use adopted plans consistent with State CEQA Guidelines Section 15183.5 to analyze and mitigate the significant effects of GHGs under CEQA at a programmatic level by adopting a plan for the reduction of GHG emissions. Later, as individual projects are proposed, project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review in their cumulative impacts analysis. Project-specific environmental documents prepared for projects consistent with the General Plan and the CAP may rely on the programmatic analysis of GHGs contained in this document.

A project-specific environmental document that relies on this CAP for its cumulative impacts analysis must identify specific GHG reduction measures applicable to the project and demonstrate the project's incorporation of the measures. Project applicants and City staff will identify specific measures applicable to each project during project review. If applicable measures are not otherwise binding and enforceable, they must be incorporated as mitigation measures for the project. If substantial evidence indicates that the GHG emissions of a proposed project may be cumulatively considerable, notwithstanding the project's compliance with specific measures in this CAP, an EIR must be prepared for the project. This CAP includes a Consistency Checklist, contained in **Appendix 3**, which City staff can use to keep track of which reduction measures an individual project complies with. This checklist also helps project applicants quickly identify which reduction measures may apply to their project.

## CLIMATE ACTION PLANNING PROCESS

The City facilitated a collaborative process to prepare the CAP. City staff, the public, and an appointed advisory body, the Sustainability and Infrastructure Commission, provided ongoing input on CAP development. Stakeholders in San Mateo vetted and recommended appropriate strategies reflective of the community. The outreach process served to develop a plan that responds to community leadership and priorities. The strategies



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in this CAP reflect those community priorities and recommendations. Engaging the community also allowed the City to build and nurture partnerships necessary to implement the CAP.

## Staff Engagement

Many measures in this CAP rely on the City of San Mateo taking action to reduce community-wide GHG emissions. Interdepartmental engagement was essential in the development of the CAP to ensure that goals are attainable and appropriate for each responsible department. Members of the CAP project team consulted with staff from multiple City departments, including Public Works, Community Development, and the City Manager's Office. Drawing on the expertise of these departments helped define actions that the City was both capable and supportive of. Specific measures refined through staff engagement include transit-oriented development, sustainable streets, transportation demand management, recycling and waste reduction, development review, and housing programs.

## Sustainability and Infrastructure Commission

In 2014, City Council created the Sustainability Commission and appointed five San Mateo residents. In 2018, the City Council combined the Sustainability Commission with the Public Works Commission, forming the Sustainability and Infrastructure Commission. This body provides recommendations to the City Council for policies and programs related to environmental sustainability, transportation, and infrastructure. Throughout the CAP update process, the project team met with the City of San Mateo Sustainability and Infrastructure Commission five times to provide updates, answer questions, summarize quantitative analyses, and to collaborate on the development of new GHG reduction measures. The Sustainability and Infrastructure Commission was able to lend valuable insight into local priorities and concerns in the development of measures to meet reduction targets. This allowed for refinement of measures that focus on emissions sources and community values specific to San Mateo, helping to shape a CAP that improves the environmental, social, and economic health of the City.

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## Public Engagement

Residents of San Mateo were invited to contribute ideas and concerns throughout the CAP development process. The project team hosted a community workshop at the San Mateo Public Library. Additionally, five public meetings with the Sustainability and Infrastructure Commission served as a platform for citizens to continue to voice their thoughts about the CAP update and related sustainability topics.

### Community Workshop

The City hosted a community workshop at the San Mateo Public Library on June 6, 2019. The goals of the forum were for participants to:

- Become aware of the project and the community's role in the planning process.
- Learn about the CAP and CAP update, and San Mateo's efforts to reduce GHG emissions.
- Learn about the City's contributions to climate change and the threat climate change poses to the community.
- Engage with the CAP update team and share what they are doing to reduce GHGs, where they think more work by the City is needed, and what they think should be in the City's strategy to address climate change.



**San Mateo community members participate in the June 6, 2019 CAP workshop.**

*Photo by PlaceWorks*

Approximately 50 people attended the workshop. The event began with a half-hour presentation by members of the CAP update project team that reviewed the sources of San Mateo's GHG emissions, an overview of the City's efforts to implement the CAP since it was first adopted in 2015, and a review of the new opportunities to reduce San Mateo's GHG emissions. After the presentation was an open house session. During this period, the project team seven large posters around the room, and participants were provided with green, yellow, and red sticky dots. Six posters listed potential GHG reduction strategies for the CAP, and participants were asked to place sticky dots on the posters as a means of voting (green for policies that participants support, yellow for policies that participants would consider but have concerns about, and red for policies that participants do not support). The project team set up blank sheets of paper next to each poster and invited participants to leave more detailed comments. The seventh poster asked participants to write down a "big idea" for GHG reduction or share other open feedback.

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During the open house period, participants were free to visit any or all posters in any order. Members of the project team were positioned at the different posters to answer questions and help guide participants through the activity.

**Appendix 4** summarizes the results of the community workshop.



**San Mateo community members shared their big ideas for GHG reduction at a community workshop.**

*Photo by PlaceWorks*



# CHAPTER 1

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## Chapter 2

# Greenhouse Gas Inventories, Forecasts, and Reduction Targets

### BACKGROUND

State, regional, and local laws, along with agencies tasked with local regulatory oversight, have influenced common methods, and provided an impetus for identification of reduction targets in California. A greenhouse gas (GHG) emissions inventory and forecast lays the groundwork for this CAP, which seeks to align the City's GHG reduction efforts with state-recommended targets. The City is committed to achieving a 40 percent reduction from 1990 emissions levels by 2030 (equivalent to a 49 percent reduction below 2005 levels by 2030), and an 85 percent reduction from 1990 levels by 2045 (equivalent to an 87 percent reduction below 2005 levels).

### BASELINE GREENHOUSE GAS EMISSION INVENTORY

A greenhouse gas inventory is a summary of the GHG emissions occurring as a result of activities that take place within a community. In some instances, the emissions themselves may be emitted within the jurisdiction, such as emissions from a car being driven within the community's boundaries. In other cases, the emissions may occur elsewhere but are included because the activity responsible for generating the emissions took place within the jurisdiction, such as a community member using electricity generated by a power plant in another part of California. Inventories help allow elected officials, City staff, and members of the public to understand what activities generate GHG emissions.



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## Protocols and Guidance

Reduction targets are developed based on a calculation of current and future GHG emissions, called the GHG inventory. The GHG inventory reflects the GHG emissions associated with everyday activities in the community of San Mateo, such as the electricity used in homes, miles traveled in vehicles, and waste sent to landfills.

Creation of the community inventories is based on emissions factors and methods in an evolving field of science. Over the past several years, organizations in California and throughout the United States have established protocols to assist and guide communities in assessing GHG emissions from government operations and community activities. While these protocols are not regulatory, they identify relevant sources or activities, recommend methods to estimate GHG emissions from each source, and provide consistency in the identification, assessment, and presentation of emission results across multiple jurisdictions.

In California, and as recommended by the Governor's Office of Planning and Research, many communities utilize the 2012 US Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, commonly referred to as the US Community Protocol, to identify and assess community activities. The protocol provides guidance on how to measure and report community-wide GHG emissions, including identification of relevant sources or activities, methods to estimate GHG emissions from each source, and consistency in the identification, assessment, and presentation of emissions results across multiple jurisdictions.

The City's community-wide GHG inventory was prepared using protocols and best practices identified within the US Community Protocol, supported by methods in the Local Government Operations Protocol (LGOP) v. 1.1 where appropriate.

## Prior Inventories

The CAP relies on four existing GHG inventories, which were all revised for consistency with current recommended methods and best practices as part of this CAP:

- 1) A 2005 baseline inventory originally developed by ICLEI and revised during the preparation of the 2015 CAP,
- 2) A 2010 inventory prepared as part of the regional RICAPS program (as discussed in Chapter 1),
- 3) A 2015 inventory prepared as part of the regional RICAPS program (as discussed in Chapter 1),
- 4) A 2017 inventory prepared as part of the regional RICAPS program (as discussed in Chapter 1).



# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

To ensure accurate comparisons across all three existing inventories, the project team adjusted some of the methods of these past efforts to apply a consistent approach. This also helped ensure that all inventories were fully in compliance with the US Community Protocol. The project team made five key changes to the inventories:

- **Updated Global Warming Potential (GWP) figures:** Previous inventories used GWPs (measurements of how much heat is trapped by a unit of GHGs) reported in the IPCC's Second Assessment Report, first released in 1995. The project team updated these values to use the most recent GWPs from the IPCC's Fifth Assessment Report, which was released in 2013.
- **"Origin-destination" VMT methodology:** In the past, inventories utilized the "in-boundary" methodology for estimating vehicle miles travelled (VMT) in San Mateo. This method includes all VMT that occur within the city boundary, including pass-through traffic, regardless of trip origin or destination. An alternative method, the "origin-destination" method, has been determined to be a more accurate representation of VMT in a city. As a result, the inventories were updated to use this approach. The "origin-destination" VMT methodology only accounts for vehicle trips that begin and/or end within the city boundary and ignores "pass-through" trips that travel through San Mateo but begin and end elsewhere (for example, a person commuting from Redwood City to San Francisco on US-101).
- **Consistent off-road equipment method:** Previous inventories used CARB's OFFROAD2007 model to estimate total emissions from off-road equipment. The project team revised the off-road equipment emissions for all previous inventories using the updated CARB Emission Factor (EMFAC) model and updated US Environmental Protection Agency (USEPA) emission factors to maintain consistency with previous inventory methodologies.<sup>1</sup> The EMFAC model provides more reliable information about off-road equipment types and fuel use in the region than the previous version.
- **Reporting of direct access electricity:** In the past, data on total electricity use associated with direct access customers (customers that purchase electricity directly from a power provider, rather than a utility such as PGE or PG&E) in San Mateo was not available. Historically, direct access electricity consumption was estimated based on County-level direct access electricity consumption data. In recent years, direct access electricity consumption data has become available at the city level and the inventories were updated to reflect this.
- **Reporting of transmission and distribution losses for electricity and natural gas:** Transmission and distribution losses in electricity refer to the energy lost as heat during the transportation of electricity from power plants to end-users through transmission and distribution networks. Similarly, methane emissions result from transmission and distribution of natural gas and end-use leakage. Methane end-

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<sup>1</sup> EMFAC is a model developed by the California Air Resources Board to calculate statewide or regional emissions from vehicle activity data from all motor vehicles. More information can be found at: <https://arb.ca.gov/emfac/>.

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use leakage refers to the unintentional release of methane from the final use of natural gas, such as from pipelines, storage facilities, and appliances.

- **Land use and sequestration:** Land use decisions can result in the release of emissions through the development of previously undeveloped land, or the removal (or sequestration) of carbon from the atmosphere through the creation and protection of urban trees and open space. The project team calculated land use emissions and sequestration (negative emissions) for the 2005 and 2019 inventories.

## 2019 Inventory

The project team prepared a 2019 GHG inventory to provide the most up-to-date available measurement of how San Mateo's GHG emissions have changed over time, including since the 2015 CAP. This inventory uses the same methods as the updated prior inventories, ensuring that all four inventories in the CAP are consistent with each other.

## Inventory Results

The community-wide inventories in the CAP include the following sectors, consistent with guidance in the US Community Protocol:

- **On-road transportation:** on-road vehicle trips on local roads and State highways within the city limits.
- **Commercial/industrial built environment:** electricity and natural gas used in nonresidential settings (e.g., industrial, commercial), including direct access electricity.
- **Residential built environment:** electricity and natural gas used in residential settings.
- **Off-road equipment:** the use of portable equipment and vehicles that do not travel on roads (e.g., construction or lawn and garden equipment).
- **Solid waste generation:** material produced by the community that is deposited in landfills which decompose and produce methane.
- **Landfills:** emissions that occur in the inventory year as a result of waste-in-place at a landfill that is within the community boundary or operated by the City.
- **Rail:** emissions resulting from Caltrain trips generated by passengers at three stations: San Mateo, Hayward Park, and Hillsdale, as well as emissions from freight trains.
- **Water and wastewater:** energy used to treat and pump water used and wastewater created, along with emissions from the processing of wastewater.
- **Land use and sequestration:** emissions resulting from development of previously undeveloped land and sinks (negative emissions) from carbon sequestration of open space and urban trees.

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

- **Point sources:** stationary source emissions resulting from fossil fuel combustion within the county as reported by BAAQMD. These emissions are included as an informational item and are not counted as part of the City's total emissions based on guidance from BAAQMD as they are not under the jurisdiction of the City.

**Table 2** shows the number of residents in San Mateo for the inventory years.

**Table 2: San Mateo Population (2005 – 2019)**

Indicator	2005 Value	2010 Value	2015 Value	2017 Value	2019 Value	Percentage Change, 2005–2019	Source
Population	93,400	97,110	101,610	103,470	104,599	12%	CA Dept. of Finance, ABAG

In the baseline year of 2005, the GHG emissions from the covered activities totaled 666,410 MTCO<sub>2</sub>e, as shown in **Table 3** and **Figure 5**. The sector with the largest portion of emissions was on-road transportation, which produced 282,370 MTCO<sub>2</sub>e, or 42 percent of all community emissions. The next largest sector, commercial/industrial built environment, produced 169,000 MTCO<sub>2</sub>e, 25 percent of the total. The residential built environment was the third largest sector with 25 percent of total emissions (163,770 MTCO<sub>2</sub>e) followed by solid waste generation (22,180 or 3 percent), the off-road equipment (15,900 MTCO<sub>2</sub>e or 2 percent), and landfill (7,370 MTCO<sub>2</sub>e or 1 percent) sectors. Rail emissions totaled 4,350 MTCO<sub>2</sub>e (1 percent) and water and wastewater emissions totaled 2,520 MTCO<sub>2</sub>e (less than 1 percent of total emissions). Finally, land use and sequestration were responsible for a reduction in emissions of 1,050 MTCO<sub>2</sub>e, equivalent to removing 1 percent of total emissions.



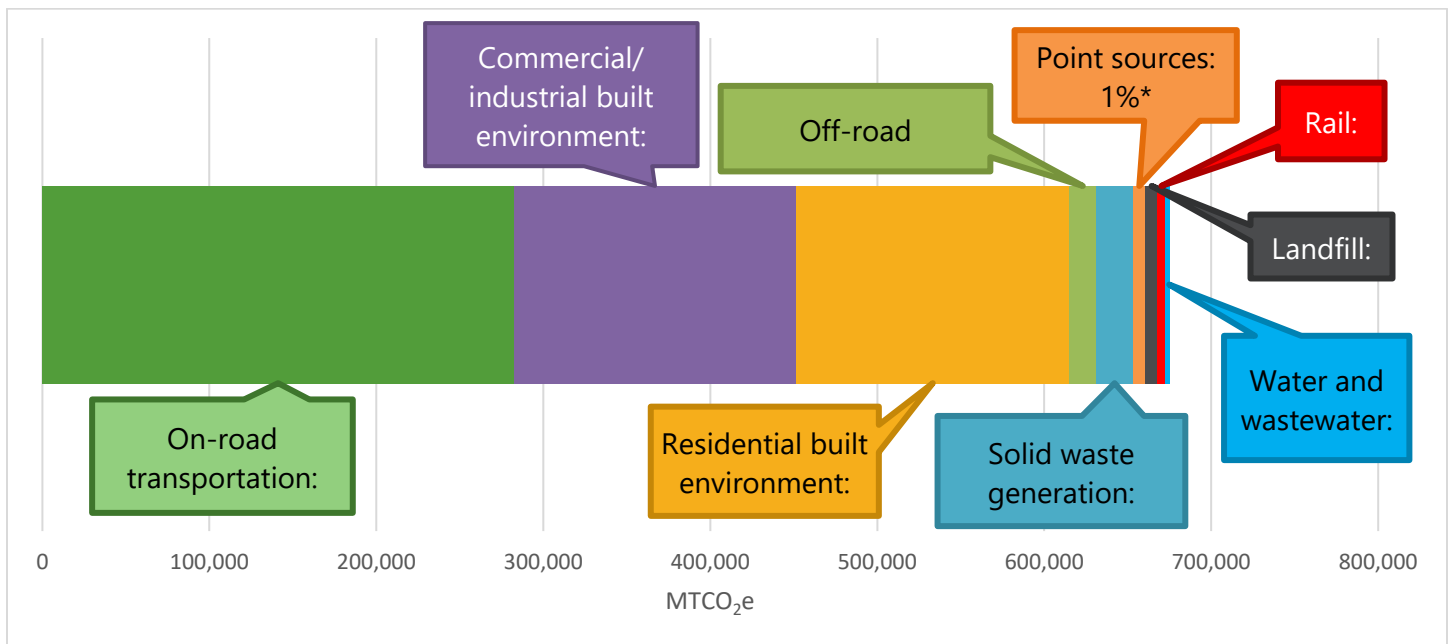
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**Table 3: San Mateo 2005 Community-Wide GHG Emissions**

Sector	MTCO <sub>2</sub> e	Percentage
On-road transportation	282,370	42%
Commercial/industrial built environment	169,000	25%
Residential built environment	163,770	25%
Solid waste generation	22,180	3%
Off-road equipment	15,900	2%
Landfill	7,370	1%
Rail	4,350	1%
Water and wastewater	2,520	0%
Land use and sequestration	-1,050	-1%
<b>Total</b>	<b>666,410</b>	<b>100%</b>
<b>Informational Items</b>		
Point sources	7,390	1%

*Note: Due to rounding, totals may not equal the sum of the component parts.*

**Figure 5: San Mateo 2005 Community-Wide GHG Emissions (MTCO<sub>2</sub>e)**



\* Point sources are included as an informational item and are not counted towards the total GHG emissions for the city.

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

## Interim Inventories

The 2010, 2015, and 2017 inventories show how San Mateo's GHG emissions have changed over time. Total emissions declined from 666,410 MTCO<sub>2</sub>e in 2005 to 520,410 MTCO<sub>2</sub>e in 2019, a decrease of 22 percent. Emissions from most sectors declined as well, except for emissions from point sources and rail activity. Overall, the relative proportion of emissions from different sectors remained similar (on-road transportation emissions remained the largest source of emissions, followed by residential and commercial/industrial built environment, then off-road equipment, etc.). **Tables 4 and 5** and **Figure 6** show the change in San Mateo's community-wide GHG emissions from 2005 to 2019.

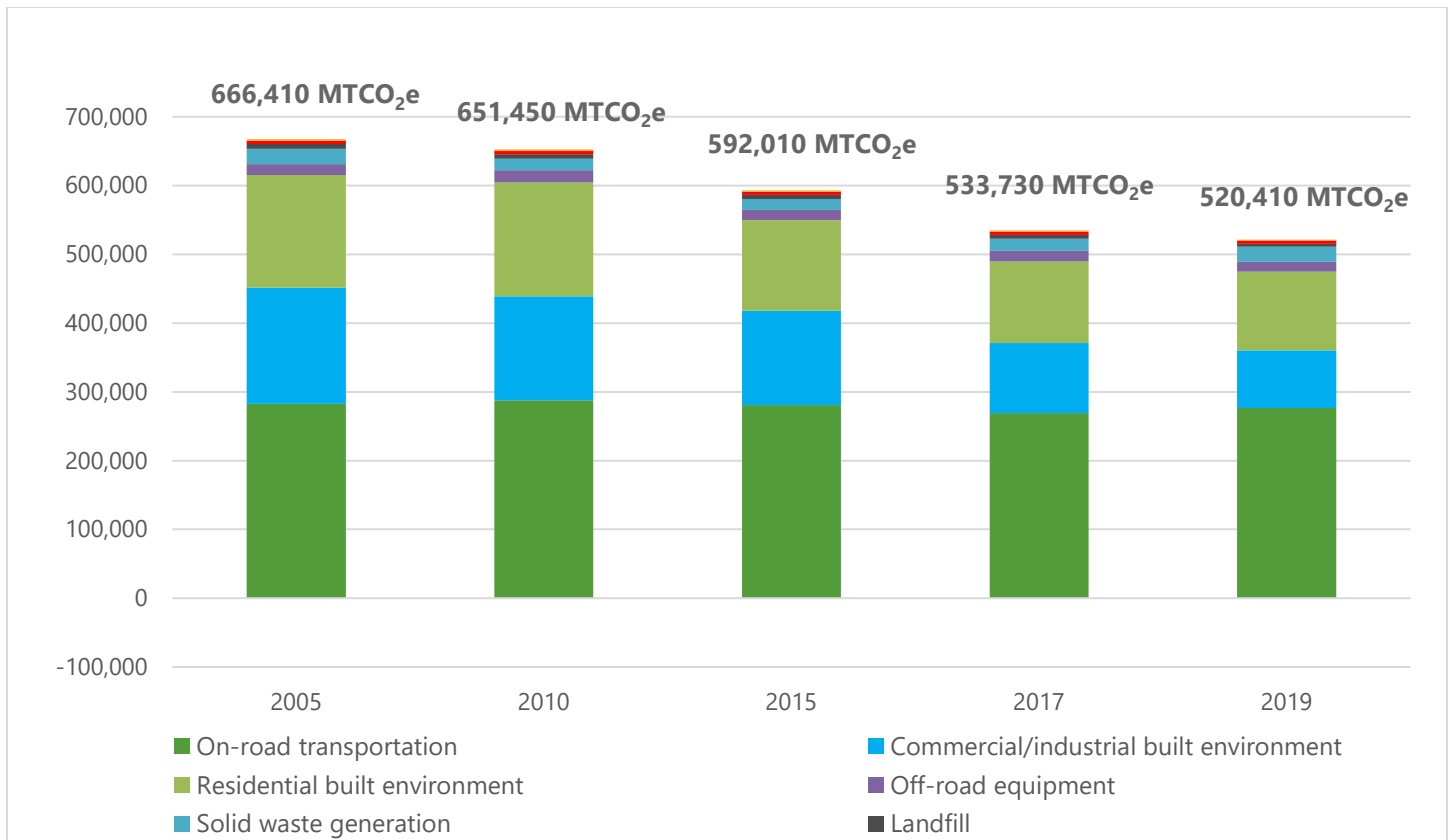
**Table 4: San Mateo 2005-2019 Community-Wide Emissions**

Sector	2005 (MTCO <sub>2</sub> e)	2010 (MTCO <sub>2</sub> e)	2015 (MTCO <sub>2</sub> e)	2017 (MTCO <sub>2</sub> e)	2019 (MTCO <sub>2</sub> e)	Percentage Change, 2005 to 2019
On-road transportation	282,370	287,550	280,570	269,110	276,560	-2%
Commercial/industrial built environment	169,000	151,200	137,350	101,720	83,660	-50%
Residential built environment	163,770	165,800	131,660	118,980	114,630	-30%
Off-road equipment	15,900	17,840	14,960	14,940	14,400	-9%
Solid waste generation	22,180	16,580	15,860	17,890	21,910	-1%
Landfill	7,370	6,670	6,030	5,800	4,180	-43%
Rail	4,350	4,480	4,410	4,520	4,440	2%
Water and wastewater	2,520	2,380	2,220	1,810	1,670	-34%
Land use and sequestration	-1050	-1,050	-1,050	-1,040	-1040	-1%
<b>Total</b>	666,410	651,450	592,010	533,730	520,410	-22%
<b>Informational Item</b>						
Point sources	7,390	7,390	11,610	14,230	18,090	145%

*Note: Due to rounding, totals may not equal the sum of the component parts.*

## CHAPTER 2

**Figure 6: San Mateo 2005-2019 Community-Wide GHG Emissions (MTCO<sub>2</sub>e)**



The decrease in GHG emissions from most sectors is due to less resource use, less GHG-intensive resources, or both. For example, San Mateo buildings used approximately 10 percent less electricity in 2019 than in 2005. Additionally, the electricity used in San Mateo also generated 77 percent fewer GHGs per kilowatt-hour (kWh) in 2019 than in 2005, causing emissions from building electricity use to fall by 80 percent. In another case, San Mateo community members drove 14 percent more miles in 2019 than 2005, but cars became 15 percent cleaner during this period, causing a 2 percent decline in emissions.

It is important for community members to see their role in producing, and therefore reducing, GHG emissions. **Table 5** presents the 2005 baseline and 2019 current-year inventory results in a per-capita format. In 2005, residents produced 7.14 MTCO<sub>2</sub>e per person. In 2019 residents produced 4.98 MTCO<sub>2</sub>e per person.



# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

**Table 5: San Mateo 2005 and 2019 Community Emissions (Per-Capita)**

	2005	2019
MTCO <sub>2</sub> e per-capita	7.14	4.98

## GREENHOUSE GAS EMISSIONS FORECAST

A forecast of future GHG emissions helps to ensure consistency with the guidelines for a Qualified GHG Reduction Strategy put forward by BAAQMD, as described in **Chapter 1**. A forecast allows elected officials, City staff, and community members to identify the amount of reductions necessary in order to achieve future GHG reduction targets and can help support long-range community planning efforts. The CAP update includes a forecast for the calendar years 2030, 2040, and 2045.

A GHG emissions forecast estimates how emissions would grow over time if no action is taken at the federal, State, or local level to reduce them. A set of indicators determines the extent of growth that could occur and how resulting emissions may change. An emissions forecast was prepared for San Mateo using the best available information regarding indicators and growth rates. The forecast relies on growth assumptions from the buildout projections in the Strive San Mateo General Plan 2040. Activity data rates in the forecast, such as household energy use, vehicle miles travelled, or per person waste disposal, are based on the 2019 emissions inventory.

**Table 6** presents data from 2019 and projections for the years 2030, 2040, and 2045.

**Table 6: San Mateo 2019, 2030, 2040, and 2045 Growth Indicators**

Indicator	2019 Value	2030 Value	2040 Value	2045 Value	Percentage Change, 2019–2045
Population	104,599	129,210	156,585	172,370	65%
Households	39,771	49,260	59,843	65,960	66%
Jobs	61,232	69,400	77,760	82,310	34%
Service population <sup>1</sup>	165,831	198,610	234,345	254,680	54%

<sup>1</sup> Service population is the sum of the residential population and the number of jobs.

## CHAPTER 2

Each indicator is used to project future emissions for the following sectors:

- Population: off-road equipment (lawn and garden equipment, pleasure crafts, portable equipment, and recreational equipment).
- Households: Residential built environment.
- Jobs: Commercial/industrial built environment, off-road equipment (industrial equipment and light commercial equipment).
- Service population: On-road transportation, rail (Caltrain), off-road equipment (construction and mining equipment, transportation refrigeration units), solid waste generation, water and wastewater.

Emissions from direct access electricity, point sources, and freight trains are held constant, and are not projected to change over time. Construction and mining emissions, part of the off-road equipment sector, are forecasted by the change in service population. Landfill emissions are based on decomposition rates provided by CARB and are not forecasted by an indicator. Land use and sequestration emissions are based on the acreage of forested land, developed land, and urban areas, as projected by the Strive San Mateo General Plan 2040.

The project team applied these indicators to forecast future GHG emissions. Relative to 2019 emissions, San Mateo's GHG emissions are expected to rise by more than 44 percent by 2045 if no action is taken. The forecast assumes that each person in San Mateo will continue to contribute the same amount of GHGs to the community's total, so that the amount of GHGs increase as the demographics of the community change. **Tables 7 and 8** show San Mateo's forecasted community-wide GHG emissions

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

**Table 7: San Mateo Community-Wide BAU GHG Emissions Sector Totals**

Sector	2019 (MTCO <sub>2</sub> e)	2030 (MTCO <sub>2</sub> e)	2040 (MTCO <sub>2</sub> e)	2045 (MTCO <sub>2</sub> e)	Percentage Change, 2019–2045
On-road transportation	276,560	308,930	351,730	375,310	36%
Commercial/industrial built environment	83,660	93,710	104,010	109,610	31%
Residential built environment	114,630	141,960	172,460	190,110	66%
Off-road equipment	14,400	23,770	26,620	30,360	111%
Solid waste generation	21,910	26,240	30,960	33,650	54%
Landfill	4,180	4,470	3,660	3,310	-21%
Rail	4,440	5,220	6,080	6,560	48%
Water and wastewater	1,670	1,990	2,340	2,540	53%
Land use and sequestration	-1,040	-1,050	-1,050	-1,050	0%
<b>Total</b>	<b>520,400</b>	<b>605,240</b>	<b>696,810</b>	<b>750,400</b>	<b>44%</b>
Percentage Change from 2005	-22%	-9%	5%	13%	
<b>Informational Item</b>					
Point sources	18,090	18,090	18,090	18,090	0%

*Note: Due to rounding, totals may not equal the sum of the component parts.*



# CHAPTER 2

## GHG EMISSIONS REDUCTION TARGETS

The California Environmental Quality Act (CEQA) Guidelines Section 15183.5(b) requires that a Qualified GHG Reduction Strategy contain a goal for substantive GHG reductions, although the guidelines do not set a specific level for what these goals should be. In the Climate Change Scoping Plan (Scoping Plan), the State provides its statewide GHG reduction targets and guidance for local communities. The CAP uses 2005 as a baseline year for measuring progress towards emission targets. In the 2015 CAP, the City adopted a GHG reduction target of 15 percent below the baseline 2005 GHG emission levels by 2020. The City chose this reduction target to remain consistent with the state-recommended target at the time, which was a reduction of 15 percent below existing levels by 2020, which is the local equivalent of the state's own adopted reduction target of reducing emissions to 1990 levels. Although "existing emission levels" was not formally defined by the Scoping Plan, agencies throughout California have often interpreted it as referring to emissions occurring between 2005 and 2008. San Mateo's GHG reduction strategies have used 2005 emissions as the "existing" levels and the State targets to inform the 2030 and 2045 targets listed below.

These statewide targets are:

- 2030: Reduce emissions 40 percent below 1990 levels, codified into law by SB 32 (2016)
- 2045: Reduce emissions 85 percent below 1990 levels and achieve carbon neutrality, codified into law by AB 1279 (2022).

Based on the results of the quantification process to identify the GHG reduction potential from this CAP (see Chapter 3), the City determined that the statewide targets for 2030 and 2045 were appropriate for San Mateo. To ensure that the CAP can continue to serve as a Qualified GHG Reduction Strategy, San Mateo has set its 2030 and 2045 targets to align with the State's targets. In the quantification of the CAP measures, 2040 is used as an interim benchmark as it aligns with the horizon of Strive San Mateo General Plan 2040 and tracks progress towards the 2045 target. These targets are meant to serve as ceilings for future GHG emissions. As discussed in the following chapter, the City has the potential to achieve greater GHG reductions, decreasing emissions below these levels.

Previous versions of the Scoping Plan have recommended per-capita targets for community-wide plans, such as a CAP. The 2020 CAP, prior to the 2023 update, used per-capita targets as recommended by the most recently adopted version of the Scoping Plan at the time it was written. With the adoption of AB 1279 and the 2022 Scoping Plan, State guidance recommends that local governments use "absolute" GHG reduction targets consistent with statewide GHG reduction goals. This version of the CAP uses absolute GHG reduction targets.

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

## Qualified GHG Reduction Strategies

These revised targets help ensure that the 2020 CAP will continue to serve as San Mateo's Qualified GHG Reduction Strategy, which allows developments that are consistent with the CAP to streamline their environmental review. As noted in Chapter 1, the requirements for a Qualified GHG Reduction Strategy are:

- Quantify emissions, both existing and projected over a time period, from activities in a defined area.
- Establish a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of persons that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specific levels.
- Adopt the GHG reduction strategy in a public process following environmental review.

## CHAPTER 2



The targets in the CAP can apply to individual development projects as well as the entire community, helping to streamline the environmental review projects that are consistent with San Mateo's GHG reduction efforts.

*Photo by City of San Mateo*





## Chapter 3

# Strategies to Achieve the Targets

To understand the level of action necessary to achieve the City's reduction targets this updated CAP analyzes existing, planned, and future actions. By first looking at these accomplishments, the City can understand progress achieved and outstanding opportunities. Existing and current efforts provide a foundation for this CAP. New measures can further close the gap and guide future programs. Together, these efforts serve as the City's multipronged strategy to achieve reduction targets.

**Table 8** shows the GHG emission levels that are expected to result when this CAP is fully implemented, based on the results of the analyses in this chapter, along with the GHG reduction targets.

**Table 8: San Mateo Emissions with CAP Implementation (2030 – 2045)**

	2030	2045
Projected Emission level	311,990 MTCO <sub>2</sub> e	80,550 MTCO <sub>2</sub> e
Target	339,880 MTCO <sub>2</sub> e	84,970 MTCO <sub>2</sub> e
Target achieved?	Yes	Yes
Gap to target	-27,890 MTCO <sub>2</sub> e	-4,420 MTCO <sub>2</sub> e

The CAP achieves these reductions by accounting for the GHG reductions from existing and planned State, regional, and local activities, along with the reduction measures in the CAP itself. **Table 9** shows the reduction levels achieved by the individual measures in the CAP. More details about the measures and all other reductions are given below.



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**Table 9: Reductions from CAP Measures (2030 – 2045)**

Measure	2030	2040	2045
BE 1: All-electric new construction	-21,070	-38,450	-47,250
BE 2: All-electric existing buildings	-102,210	-184,610	-221,260
RE 1: Peninsula Clean Energy	-160	-170	0
RE 2: Renewable energy systems for new and existing residences	-70	-160	0
RE 3: Renewable energy systems for new and existing nonresidential buildings	-60	-90	0
EE 1: Residential energy efficiency retrofits	-6,160	-7,020	-6,790
EE 2: Nonresidential energy efficiency retrofits	-3,800	-8,860	-13,380
EE 3: Residential tree planting	Less than -10	Less than -10	Less than -10
ME 1: Energy efficiency for new municipal buildings	Supportive (no measurable GHG reductions)		
ME 2: Energy efficiency at existing municipal buildings	-10	-30	-40
ME 3: All-electric municipal buildings	-130	-200	-270
CF 1: Electric vehicle charging infrastructure	-24,420	-49,390	-69,780
CF 2: Electric vehicle education and outreach	-4,910	-8,030	-12,360
CF 3: Clean city fleet	-130	-200	-270
CF 4: Clean fuel and vehicle emissions	-4,210	-16,920	-26,360
ST 1: Bicycle mode share	-80	-170	-180
ST 2: Pedestrian mode share	-110	-120	-130
ST 3: Micromobility and shared mobility	Supportive (no measurable GHG reductions)		
ST 4: Public transit service	-3,610	-5,660	-6,910
ST 5: Commuter programs	Less than -10	-70	-160
ST 6: Transportation Demand Management	-2,010	-7,950	-13,410
ST 7: Transit-oriented development	-10,200	-18,920	-23,700
SW 1: Composting program	-1,030	-1,710	-1,850

# STRATEGIES TO ACHIEVE THE TARGET

Measure	2030	2040	2045
SW 2: Expanded recycling service	-6,070	-7,730	-8,820
SW 3: Waste awareness and source reduction	-2,080	-4,050	-5,590
WW 1: Water efficiency retrofits for existing buildings	-170	-300	-360
WW 2: Water-efficient landscaping	Less than -10	-10	0
WW 3: Water efficiency in new construction	Less than -10	-10	-20
OR 1: Alternative fuel lawn and garden equipment	-3,660	-7,130	-9,890
<b>Total</b>	<b>-196,360</b>	<b>-367,960</b>	<b>-468,780</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

## Existing and Planned Accomplishments

Both State and local efforts have achieved additional progress toward the reduction target, reducing the outstanding gap of emissions to achieve the City's reduction targets described in the previous chapter.

As mentioned in Chapter 2, the GHG emissions forecast is based on the results of the 2019 inventory and assumes that per-capita activity remains constant, so that changes in projected emissions are based on expected changes in San Mateo's demographics. This approach means that any action taken through 2019 to reduce GHG emissions is already taken into consideration for the forecast. For example, if homes installed solar energy systems in 2018, the effect of that action (lower residential electricity use) will already show up in the 2019 inventory, and by extension will be carried through into the forecast.

### State Existing and Planned Accomplishments

Since passing AB 32, the State has enacted regulations and programs to reduce GHG emissions. Although statewide in scope, these actions affect several sources of San Mateo's emissions, and so the local benefits of these State efforts can be "credited" to San Mateo even in cases where the community has not needed to take any action. This CAP includes the local benefits from five State policies:

- Renewables Portfolio Standard:** The Renewables Portfolio Standard (RPS) was first established in 2002 and has been amended multiple times, most recently by SB 100 in 2018. It requires all electricity providers in the State to obtain at least 33% of their electricity from eligible renewable resources by the end of 2020, 60% of their electricity from eligible renewable resources by the end of 2030, and all of their electricity from carbon-free (although not necessarily eligible renewable) resources by the end of 2045.



# CHAPTER 3

This policy reduces GHG emissions from electricity use, including electricity used to transport and process water and wastewater, and electricity used for electric vehicles.

- **Clean Car Standards:** In 2002, California adopted AB 1493, the New Passenger Motor Vehicle Greenhouse Gas Emission Standards or Pavley standard. It requires a reduction in tailpipe GHG emissions from new vehicles produced from 2009 to 2015. In 2012 CARB adopted an extension of this policy, the Advanced Clean Car Standards, which require more stringent reductions in tailpipe GHG emissions from vehicles produced from 2016 to 2025. In 2022, CARB adopted a further extension, known as Advanced Clean Cars II, which apply to vehicles produced from 2026 to 2035, and require that all new light-duty vehicles sold in California be zero-emission by 2035. The Clean Car Standards (including the Advanced Clean Car Standards) reduce GHG emissions from on-road transportation.
- **Title 24 Energy Efficiency Standards:** Title 24 is California's energy efficiency standards for new buildings, applied at the local level through the project review process. The standards are strengthened every three years, with the ultimate goal of making new buildings net-zero energy, meaning that they would generate as much energy as they use. The most recent set of Title 24 standards went into effect on January 1, 2023. This policy will reduce GHG emissions from electricity and natural gas use in new homes and nonresidential buildings.
- **SB 1383:** California's SB 1383 aims to reduce GHG emissions from organic waste by requiring businesses and residents to separate their organic waste from other waste streams for recycling or composting. The law sets targets for reducing organic waste disposal in landfills by 75 percent by 2025 and requires local jurisdictions to implement organic waste recycling programs to meet these goals.

Collectively, the State reduction efforts are expected to reduce San Mateo's GHG emissions below forecasted levels by 72,890 MTCO<sub>2</sub>e in 2030, 147,970 MTCO<sub>2</sub>e in 2040, and 196,150 MTCO<sub>2</sub>e in 2045. **Table 10** shows the emission reductions from the individual State existing activities.

## Renewable and Carbon-Free Electricity

California's RPS establishes requirements for both eligible renewable and carbon-free electricity. Eligible renewable resources are those that are specifically defined under state law, and include solar, wind, geothermal, small-scale hydroelectric, and most forms of bioenergy. Carbon-free sources include eligible renewable sources, as well as others that do not emit GHGs but are not officially defined as renewable, including large-scale hydroelectric and nuclear energy.

# STRATEGIES TO ACHIEVE THE TARGET

**Table 10: San Mateo Community-Wide GHG Emissions Reductions from State Programs**

Policy	2030 Emissions (MTCO <sub>2</sub> e)	2040 Emissions (MTCO <sub>2</sub> e)	2045 Emissions (MTCO <sub>2</sub> e)
Forecasted emissions	605,240	696,810	750,400
Clean Car Standards	-55,030	-95,730	-109,680
Renewables Portfolio Standard	-4,720	-15,330	-39,860
Title 24	-9,380	-32,480	-41,790
SB 1383	-3,760	-4,430	-4,820
Total reductions from existing State programs	-72,890	-147,970	-196,150
<b>Emissions with existing State programs</b>	<b>532,340</b>	<b>548,840</b>	<b>554,260</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

There are other programs that reduce GHG emissions that State agencies have adopted or are planning to put into effect. These are not included in this section because of uncertainty about how these programs will be applied. In many cases, State programs may be implemented by local actions, and reductions associated with these programs are included in the local reduction measures discussed later in this chapter.

## Existing and Planned Local and Regional Accomplishments

The City of San Mateo has a successful history of developing and implementing sustainability policies. The City's adopted plans, along with leadership from community members and businesses have been partially responsible for the decline in GHG emissions since 2005. Several policies are currently in place that are expected to further reduce San Mateo's GHG emissions. Some of these accomplishments were established before the City adopted its first CAP in 2015, while others were implemented in response to the 2015 CAP.

## CHAPTER 3

The project team identified the following existing local and regional efforts that are expected to reduce San Mateo's future GHG emissions:

- **Peninsula Clean Energy:** Peninsula Clean Energy (PCE) is a community choice energy program run by the local governments of San Mateo County that is the default electric provider for the City of San Mateo and provided approximately 87 percent of the community's electricity as of 2019 (expected to grow to more than 90 percent by 2020). First established in 2016, PCE provides electricity to community members from a higher proportion of renewable and carbon-free sources than PG&E. As of 2021, PCE supplies 100 percent carbon-free electricity and plans to supply 100 percent renewable electricity by 2025.
- **Energy efficiency retrofits:** A number of single-family homes, multi-family homes, and businesses in San Mateo have conducted energy efficiency retrofits. These retrofits involve replacing older appliances with more energy-efficient models, upgrading insulation, improved sealing around windows and doors, and other types of activities. From 2015 to 2019, over 1,600 single-family and multifamily homes and at least 66 businesses, have completed energy efficiency retrofits through programs such as Energy Upgrade California and the San Mateo County Energy Watch.
- **Solar energy installation:** Since 2016, San Mateo has required in its building code that all new residential and non-residential buildings install solar energy systems. Many existing building owners have also chosen to voluntarily install these systems on their properties, reducing their electricity bills and increasing the amount of renewable energy used by the community. Since the 2020 CAP was adopted, San Mateo has installed close to 700 solar energy systems, capable of generating almost 4 MW of power.
- **Municipal energy efficiency retrofits:** In addition to the Smart Street Light program and retrofits by private property owners, San Mateo has conducted several energy efficiency retrofits at municipal properties. At the end of 2017, the City began working with PG&E to identify potential retrofit activities through the Sustainable Systems Turnkey program. San Mateo secured approximately \$3.2 million in funding for energy-efficiency upgrades to municipal facilities. Since 2020, San Mateo has conducted significant retrofits to City facilities, saving over 1,831,170 kWh and 22,871 therms annually. The City has also carried out lighting retrofits at small buildings such as public park restrooms and storage sheds, using a grant from the San Mateo County Energy Watch.



**Peninsula Clean Energy provides most of San Mateo's electricity, and offers a cleaner mix of energy sources than PG&E by default.**

*Photo by City of San Mateo*



# STRATEGIES TO ACHIEVE THE TARGET

- **Public-access EV chargers:** The City of San Mateo has installed 55 publicly accessible EV charging stations in the community since 2020, including DC fast chargers that can recharge an electric vehicle in less than an hour. In addition to helping to support EV adoption in San Mateo itself, the presence of publicly accessible EV chargers also helps boost EV adoption in the region, making it easier for people to use EVs for longer trips.

- **Transportation Demand Management:** San Mateo requires that new significant developments along the Caltrain corridor reduce the number of trips they generate relative to a conventional development project. Since 2017, there have been 895 residential units and approximately 158,370 square feet of nonresidential space planned or under construction in San Mateo that are subject to trip reduction requirements.

- **Additional bicycle lanes:** San Mateo published the 2020 Bicycle Master Plan, which proposes the development of an additional 45 miles of bicycle lanes to achieve a target of 101 bicycle lanes citywide. Improved bike infrastructure and increased connectivity of the bicycle network can reduce VMT as residents are encouraged to replace vehicle trips with bicycle trips. Since its publication, approximately 6 miles of bicycle lanes have been completed.

There is also one planned action accounted for in this CAP:

- **Caltrain electrification:** This is a plan to install overhead power lines above the tracks on the Caltrain commuter rail line between San Francisco and San Jose, which will allow Caltrain to replace most of its diesel-powered locomotives with electric ones, significantly reducing GHG emissions from Caltrain operations. As of 2020, some electric lines have been installed, but electric trains are not expected to begin carrying passengers until at least 2024.

Some actions included in the initial version of the 2020 CAP are removed for the 2023 technical CAP update as they no longer produce additional GHG emission reductions beyond 2020. GHG emission savings from these programs are already accounted for in the 2019 GHG inventory and projections of future emissions. These include:

- **Upgraded streetlights program:** San Mateo has replaced over 5,600 streetlights in the community with LED bulbs that use significantly less energy than older bulbs. This program is expected to save approximately 2 million kWh of electricity annually, equal to the yearly electricity use of almost 400 San



Public electric vehicle charging stations at a shopping center in San Mateo.

*Photo by PlaceWorks*

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Mateo homes. These LED bulbs also provide higher-quality lighting and reduce light pollution in accordance with the Dark Sky Objectives.

- **Caltrain shuttles:** The regional Peninsula Traffic Congestion Relief Alliance operates three public shuttles in San Mateo, transporting riders from the Hillsdale Caltrain station to employment centers throughout the community. These three shuttles served approximately 58,900 people in 2018. Ridership of the shuttles decreased during the COVID-19 pandemic shelter-in-place period and is therefore not quantified as a GHG reduction measure.
- **Composting:** San Mateo first established a composting program in 2011, allowing participating residents and businesses to place organic waste in a dedicated waste bin to be picked up by the community waste hauler along with trash and recyclables. With the passage of SB 1383, any GHG emission reductions associated with composting are quantified as part of the State measure.
- **Electric vehicle adoption:** San Mateo, like many other Bay Area communities, has been a leader in adopting EVs. When San Mateo's original CAP was adopted in 2015, there were approximately 1,050 EVs registered in the community, including plug-in hybrids. San Mateo adopted requirements for new development that went into effect in 2017, mandating that multifamily and nonresidential developments install EV chargers at a set number of parking spaces. By the end of 2017, the number of EVs had more than doubled to approximately 2,290, making EVs approximately 2 percent of all cars registered in the community. San Mateo adopted a revised building standard code in 2020, which requires more EV chargers and EV-capable spaces at all types of new developments. Since the projected rate of EV adoption locally does not surpass the State level adoption projection, any GHG emission reductions associated with EV adoption are quantified as part of the State's Clean Fuel Standards.

This is not a comprehensive list of all existing and planned local and regional accomplishments that may reduce GHG emissions. The City and its regional partners have implemented many other policies and programs that may contribute to GHG reductions. However, these efforts may not have clearly measurable reductions, or data on their effectiveness may not be available. In these cases, the project team is unable to credit a GHG reduction to these efforts.

As with the State reductions, the CAP credits reductions from local and regional efforts that go beyond the policies in place as of 2019, as conditions that existed in 2019 are already factored into the forecast. In addition, the CAP only credits local and regional reduction efforts if they go beyond State policy. For example, San Mateo received significant reduction credits from EV adoption in 2020 because the local numbers exceed what the State forecasts for the region. However, by 2030, State policies are expected to increase EV adoption to exceed San Mateo's current rate, so the community does not receive any additional GHG reductions from local accomplishments.

# STRATEGIES TO ACHIEVE THE TARGET

Collectively, San Mateo's existing and planned local and regional accomplishments are expected to reduce emissions by 23,990 MTCO<sub>2</sub>e in 2030, 18,360 MTCO<sub>2</sub>e in 2040, and 4,950 MTCO<sub>2</sub>e in 2045, in addition to the reductions achieved by State accomplishments. **Table 11** shows the reductions from each local and regional accomplishment.

**Table 11: Emissions Reductions from Local and Regional Programs**

Policy	2030 GHG Emissions (MTCO <sub>2</sub> e)	2040 GHG Emissions (MTCO <sub>2</sub> e)	2045 GHG Emissions (MTCO <sub>2</sub> e)
<b>Emissions with Existing State Programs</b>	<b>532,340</b>	<b>548,840</b>	<b>554,260</b>
Peninsula Clean Energy	-20,000	-13,750	0
Energy efficiency retrofits	-30	-30	-30
Solar energy installations	-20	-10	0
Municipal energy retrofits	-160	-160	-160
Public access EV chargers	0	0	0
Transportation Demand Management	-220	-200	-190
Caltrain electrification (planned)	-3,560	-4,200	-4,560
Total reductions from existing and planned local and regional programs	-23,990	-18,330	-4,940
<b>Emissions with existing and planned local and regional programs</b>	<b>508,380</b>	<b>530,510</b>	<b>549,320</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

Existing and planned local, regional, and State accomplishments reduce San Mateo's forecasted GHG emissions by a significant amount. **Table 12** shows the benefit of these accomplishments relative to San Mateo's baseline.

**Table 12: Emissions with Existing and Planned Efforts**

Policy	2030	2040	2045
2005 (baseline) emissions (MTCO <sub>2</sub> e)	666,430	666,430	666,430
Emissions with existing and planned programs (MTCO <sub>2</sub> e)	508,380	530,510	549,320
Percent below baseline emissions	-24%	-20%	-18%



# CHAPTER 3

## REVISED AND NEW GHG REDUCTION MEASURES

A central goal of the CAP update is to achieve additional GHG reductions to work toward the City's 2030, 2040, and 2045 reduction target, recognizing that the reduction measures in the 2015 CAP are insufficient to meet these reductions. To identify these additional reductions, the project team began with the 28 GHG reduction measures in the City's 2015 CAP. Some of these measures have been fully implemented, and do not need to be carried forward into the CAP update. Others are still applicable and can be revised or expanded to achieve additional GHG reductions. There are also opportunities to add entirely new measures to address new and emerging issues not covered in the 2015 CAP.

The project team based the revised and new GHG reduction measures on several sources, including:

- San Mateo's inventory and forecast.
- The existing and planned State, regional, and local accomplishments.
- Discussions with City staff to identify past successes and challenges, plans and opportunities, and goals and priorities related to GHG reduction efforts.
- An audit of energy-related strategies being recommended and implemented by communities throughout San Mateo County through the RICAPS program, working with staff from PCE and the San Mateo County Office of Sustainability
- Feedback and direction from Sustainability and Infrastructure Commission members, along with comments provided by members of the public at these meetings.
- Comments and results of the priority voting activity at the June 6, 2019, community workshop.

# STRATEGIES TO ACHIEVE THE TARGET

## Calculating Credit

This CAP uses a process called quantification to determine the amount of GHG emissions reduced by each measure. The foundation for the quantification calculations is the baseline GHG inventory and forecast. Activity data from the inventory, such as vehicle miles traveled (VMT) or kilowatt-hours (kWh), are combined with participation rates and data about the reduction in activity data from each action to calculate the GHG reduction benefit of each measure. This approach ensures that the GHG reductions from San Mateo's CAP measures are tied to current and future activities that are actually occurring in the community.

Calculations for reductions in activity data come from tools and reports provided by government agencies; these agencies include the US Environmental Protection Agency (EPA), the California Energy Commission (CEC), the California Air Resources Board (CARB), the California Air Pollution Control Officers Association, the US Department of Energy, and local air districts. If accurate data are not available through these sources, the quantification uses case studies from comparable communities and applicable scholarly research. The specific quantification process for each measure is presented in **Appendix 1**, which includes a list of data sources and assumptions.

The project team was able to identify GHG reductions for most of the measures in this CAP. However, there are a few that do not have a specific reduction level due to missing data or the lack of a reliable method. These efforts are still expected to reduce GHG emissions, but the level cannot be accurately determined. These measures are labeled as supportive.

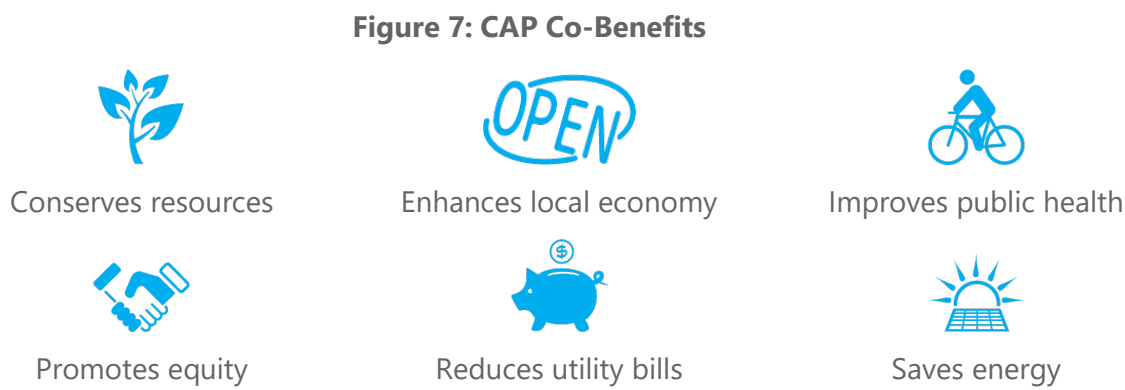
## GHG Reduction Measures

Based on the results of this process, the project team identified a total of 29 GHG reduction measures to include in this CAP. These measures include a mix of education and outreach programs to encourage GHG reduction activities, financial subsidies, and other enticements to incentivize GHG reductions, and mandates to require GHG reduction efforts. These 29 measures are organized into 9 categories:

- 1) Building Electrification (BE)
- 2) Renewable Energy (RE)
- 3) Energy Efficiency (EE)
- 4) Municipal Energy Efficiency and Electrification (ME)
- 5) Off-Road Equipment (OR)
- 6) Clean Transportation Fuels (CF)
- 7) Sustainable Transportation (ST)
- 8) Solid Waste (SW)
- 9) Water and Wastewater (WW)

# CHAPTER 3

Each measure entry includes a description of the measure, the anticipated 2030, 2040, and 2045 GHG reductions achieved by the measure at the projected performance level, and the recommended actions necessary to implement it. Assumptions, projected performance levels, sources, and metrics used to calculate GHG reductions are given for each measure in **Appendix 1**. Each measure entry also identifies the co-benefits of the measure, which are advantages provided by the measure beyond GHG reduction. **Figure 7** presents the co-benefits assessment for each GHG reduction measure.



## Building Electrification (BE)

Most buildings, both residential and nonresidential, use electricity and natural gas to operate appliances and other pieces of equipment. While sources of electricity have become much cleaner over time and will continue to become cleaner due to State law and utility policies, the GHG emissions associated with using a unit of natural gas has remained constant, as natural gas is a fossil fuel and cannot become a cleaner energy source. Buildings that receive most or all their energy from electricity instead of natural gas can significantly reduce their GHG emissions as a result. Buildings can be constructed to be mostly electric or all-electric, or existing buildings can be electrified as part of retrofit activities. Advances in electric appliances, such as those used for space heating, water heating, and cooking, have helped make building electrification easier and more cost-effective.

### BE 1: All-electric new construction

As San Mateo property owners construct new residential and nonresidential buildings, they have the option to construct these buildings to receive most or all their energy from electricity rather than natural gas. Not having to install natural gas piping decreases the cost of construction. New buildings in San Mateo must also install solar panels to generate electricity, and so all-electric buildings with solar panels may be able to generate all the energy they need on-site.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	21,070	38,450	47,250



# STRATEGIES TO ACHIEVE THE TARGET

**Recommended actions:**

- For each three-year code cycle, adopt a reach code to encourage residential and commercial new construction to be built to an all-electric standard, including electric heating, cooling, and water heating.
- Explore the feasibility of reducing permitting fees if builders elect to construct all-electric buildings instead of buildings that use natural gas.

**Co-benefits:**



Conserves resources



Improves public health



Promotes equity



Reduces utility bills

**BE 2: All-electric existing buildings**

Although most existing buildings already have natural gas infrastructure and natural gas devices installed, these systems can be converted to all-electric. Electric appliances that replace natural gas-powered models are highly efficient, readily available, and cost-effective. Many buildings can install these appliances with simple electric wiring and panel upgrades, if upgrades are required at all. The cost of converting existing buildings to mostly- or all-electric can be further reduced if the electrification is done as part of a larger retrofit activity.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	102,210	184,610	221,260

**Recommended actions:**

- Encourage residents and businesses to purchase electric technologies (e.g., air source heat pumps, heat pump water heaters, electric dryers, and electric stoves).
- Encourage residents and businesses to upgrade electric panels to accommodate electric technologies including solar PV, battery storage, air source heat pumps, heat pump water heaters, electric dryers, and electric stoves.
- Support training and outreach to residents, businesses, contractors, vendors, and installers about preferable electric equipment replacement technologies.

# CHAPTER 3

## Co-benefits:



Conserves resources



Improves public health



Promotes equity



Reduces utility bills

# STRATEGIES TO ACHIEVE THE TARGET

## Renewable Energy (RE)

### Renewable Energy Emissions Reductions in 2045

Measures that only reduce electricity use or increase renewable electricity supplies will show zero GHG reductions in 2045. This is because all electricity sold in California must be carbon-free by 2045, as required by the State's Renewables Portfolio Standard (RPS). Since there will already be no emissions from electricity use in 2045, San Mateo cannot count additional reductions associated with electricity in this year. This CAP already credits reductions from the RPS as an existing State program.

While Peninsula Clean Energy supplies most of San Mateo's electricity and is carbon-free as of 2021, some San Mateo customers are still expected to receive their electricity from PG&E or direct access providers. As these providers are not expected to be carbon-free until required by the State, measures that reduce electricity use or increase renewable electricity supplies will show some GHG reductions in 2030 and 2040, even though most of the community will already use carbon-free electricity.

Remember that local renewable energy systems and energy efficiency measures will continue to provide several co-benefits to the community, including lower electricity bills and increased resiliency against power disruptions, even if there are no measurable additional GHG reductions.

While much of San Mateo's electricity already comes from renewable or carbon-free sources, increasing the amount of energy in the community from renewable sources not only further reduces GHG emissions but also has the potential to reduce the cost of electricity for residents and enhance the local economy. By incentivizing on-site electricity generation and storage and thereby decentralizing the creation of energy, the City of San Mateo also becomes more resilient to grid failures and power shutoffs and helps make the community less dependent on outside resources.



# CHAPTER 3

## RE 1: Peninsula Clean Energy

Since beginning operations in 2016, the county-wide Peninsula Clean Energy (PCE) program has been highly successful in increasing the amount of renewable and carbon-free electricity used by the community. As of 2019, more than 97 percent of San Mateo’s residents and businesses receive their electricity from PCE. San Mateo can achieve more GHG reductions with PCE by encouraging the remaining residents and businesses to participate in the program and by supporting efforts for customers to upgrade to PCE’s ECO 100 service, which provides all electricity from renewable sources.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	160	170	0

### Recommended actions:

- Encourage residents and businesses to participate in Peninsula Clean Energy.
- Encourage residents and businesses participating in PCE to opt up to ECO 100.
- Support PCE’s outreach to direct access customers to encourage use of carbon-free electricity.

### Co-benefits:



Enhances local economy



Reduces utility bills

# STRATEGIES TO ACHIEVE THE TARGET

## RE 2: Renewable energy systems for new and existing residences

The addition of renewable energy systems to new residential buildings can often meet (and even exceed) the energy demand of the home. State and local regulations already require new homes to install solar panels of a particular size, but homeowners can choose to install larger systems to generate additional power. Existing homes not subject to this requirement can also benefit from installing renewable energy systems. Extra energy can meet any additional electricity needs of the home, or can be sold back to the grid, which helps reduce the amount of energy needed from nonrenewable sources and can help the homeowner finance the project.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	70	160	0

### Recommended actions:

- For each three-year code cycle, adopt reach codes to require residential developments to install renewable energy systems, including solar photovoltaic or solar water heating, as needed to exceed State requirements.
- Provide education and outreach to residents and contractors on the benefits of pairing battery storage with solar PV systems.
- Explore the feasibility of reducing or eliminating solar permitting fees.
- Provide information to property owners about discounts, incentives, and financing programs for renewable energy systems, including solar bulk purchase programs and financing programs that allow property owners to incrementally pay for renewable energy systems.
- Provide education and outreach to stakeholders on the benefits of retrofitting existing residential buildings to be zero net energy.
- Promote the installation of renewable energy and energy storage systems as part of major home retrofit projects.

### Co-benefits:



Conserves resources



Enhances local economy



Promotes equity



Reduces utility bills

# CHAPTER 3

## RE 3: Renewable energy systems for new and existing nonresidential buildings

The addition of distributed-generation renewable energy systems to nonresidential buildings helps reduce the amount of energy from nonrenewable sources the building requires, and in some cases may exceed the amount of electricity needed. While San Mateo requires that new nonresidential buildings include renewable energy systems, this requirement does not apply to existing buildings, which can still take advantage of the benefits provided by these systems. New nonresidential buildings can also install larger systems than local standards require, producing an additional amount of renewable energy that can either be used by the building or sold back to the grid. New construction that is built to include such systems helps reduce GHG emissions and may save businesses money on utility costs.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	60	90	0

### Recommended actions:

- For each three-year code cycle, adopt reach codes to require nonresidential developments to install renewable energy systems, including solar photovoltaics or solar water heating, as needed to exceed State requirements.
- Promote financing programs that allow developers, property owners, and tenants to incrementally pay for renewable energy systems.
- Explore the feasibility of reducing or eliminating solar permitting fees.
- Work with appropriate property owners to identify potential sites for a microgrid demonstration project. Provide education and outreach to these property owners on the multiple benefits of developing a microgrid, including reliability, cleaner energy, and cost savings.
- Encourage property owners to pair battery storage systems with solar PV systems.
- Support development of a local rebate program for on-site renewable energy systems.

### Co-benefits:



Conserves resources



Enhances local economy



Reduces utility bills



# STRATEGIES TO ACHIEVE THE TARGET

## Energy Efficiency (EE)

Electricity and natural gas are used to heat, cool, and light buildings, as well as to operate appliances and machinery. This goal seeks to provide opportunities for businesses and residents to conserve energy and maximize efficiency, which in turn reduces energy costs, supports the local economy, and further reduces GHG emissions.

### EE 1: Residential energy efficiency retrofits

Older homes, especially those built before incorporation of energy efficiency and green building standards in local and State building codes (generally before 1980), are less energy efficient than newer buildings. Home retrofit programs address a variety of improvements in existing houses and include upgrades to insulation, windows, heating, ventilating, and air conditioning (HVAC) systems, lighting, and appliances, and may reduce the average home’s energy use by 33 percent or more. San Mateo residents have already completed a limited number of retrofits, as discussed in the Existing and Planned Accomplishments section, through programs such as Energy Upgrade California.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	6,160	7,020	6,790

#### Recommended actions:

- Establish a time of sale residential energy conservation program that requires an energy audit by a certified energy professional. Audits would be disclosed to the buyer.
- Educate homeowners, real estate agents, rental property owners, and tenants about the benefits of residential energy retrofits, the availability of financing options, and how to participate.
- Provide energy retrofit information to project applicants seeking permits for renovation or expansion work on existing houses.
- Host residential energy outreach events such as evening workshops and local learn-at-lunch sessions, provide energy retrofit information at community events, and distribute information on residential energy retrofits online and in public buildings.
- Promote financing programs that allow homeowners, rental property owners, and tenants to incrementally pay for energy efficiency retrofits.
- Provide funding to support energy efficiency education and low-cost retrofits for low-income households.
- Offer low- or no-cost energy audits to rental property owners who agree to disclose a unit’s energy efficiency results to tenants.
- Encourage property owners to participate in energy benchmarking efforts.

## CHAPTER 3

- Work with tenant groups and property management companies to identify actions tenants can take within the bounds of their lease to improve energy efficiency.
- Promote incentives such as direct subsidies and reduced fee permitting to rental property owners who make energy efficiency improvements to their units beyond any minimum actions required by the adopted energy code.
- Encourage property owners to consider installing cool roofs when reroofing buildings.

### Co-benefits:



Conserves resources



Enhances local economy



Reduces utility bills



Saves energy



**Home energy audits can identify opportunities to reduce electricity and natural gas use through both retrofit activities and low- or no-cost behavioral changes.**

*Photo by Dennis Schroeder/NREL (28533)*

# STRATEGIES TO ACHIEVE THE TARGET

## EE 2: Nonresidential energy efficiency retrofits

As with residential buildings, many of San Mateo's nonresidential buildings have been constructed before the adoption of modern energy efficient building codes. Energy-efficient retrofits can help the City reduce GHG emissions and save businesses money. Retrofits to these structures can reduce energy use by approximately 35% to 45%. Property owners who are substantially remodeling their nonresidential buildings can also bring the structure up to current energy efficiency codes as part of the remodel, which can also significantly decrease the buildings' electricity and natural gas use.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	3,800	8,860	13,380

### Recommended actions:

- Develop policy requiring reporting of energy use (ENERGY STAR performance score) by commercial and multifamily buildings. Apply benchmarking ordinance to smaller commercial and multifamily buildings, below the minimum size threshold for mandatory benchmarking under AB 802 and require commercial buildings to receive an energy assessment every five to ten years depending on size.
- Educate property owners and tenants about energy efficiency retrofit programs and financing options.
- Work with property owners to offer green leases for tenants, allowing tenants to specify energy efficiency improvements to the space or to finance energy efficiency retrofits in exchange for reduced occupancy fees. Promote a green lease addendum template that can be used by nonresidential property owners to incorporate green lease language into future leases.
- Support participation in demand response programs.
- Offer low-cost energy audits for business or office parks, including identification of most cost-efficient savings for weatherization or appliance upgrades.
- Offer reduced fee permitting to project applicants undergoing specifically defined energy retrofit measures, such as a retrofit to achieve Zero Net Energy in an existing building.
- Promote the San Mateo County Green Business program to help encourage energy efficiency and sustainable actions in local businesses.
- Encourage property owners to consider installing cool roofs when reroofing buildings.

### Co-benefits:



Conserves resources



Enhances local economy



Reduces utility bills



Saves energy



## CHAPTER 3



The windows in this airport building have been retrofitted to electronically darken in bright sunlight, helping to keep the inside of the building cool. Advances such as this can be applied to San Mateo office buildings, reducing the energy use for air conditioning.

*Photo by Dennis Schroeder/NREL (54582)*

# STRATEGIES TO ACHIEVE THE TARGET

## EE 3: Residential tree planting

Shade trees provide several benefits, including reducing the urban heat island effect, reducing runoff during flood events, and providing habitat for wildlife. When properly placed, they can also help keep home interiors cool, reducing the need for homes to run their air conditioners or other cooling equipment. San Mateo can promote tree planting to help decrease home cooling demands.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	Less than 10	Less than 10	0

### Recommended actions:

- Establish a City program to provide free or subsidized shade trees for buildings with eastern, western, or southern exposure to reduce energy use associated with cooling homes.
- Partner with community organizations and applicable professional associations to support education and outreach on the benefits and best practices of strategic tree planting to provide shade and cooling. Develop guidance on the preferred tree types and the recommended approach to selecting locations for tree plantings that support energy conservation and efficiency.

### Co-benefits:



Improves public health



Reduces utility bills



Saves energy



Street trees can help keep nearby buildings cool, reducing the need for air conditioning during hot days.

Photo by PlaceWorks

# CHAPTER 3

## Municipal Energy Efficiency and Electrification (ME)

The City of San Mateo strives to serve as an example of efficiency and to embody the commitment to reducing emissions citywide. Measures and actions under this goal save energy and reduce utility bills, which preserves valuable City resources and provides green building case studies for other developments in the community.

### ME 1: Energy efficiency for new municipal buildings

The California Energy Commission is considering a goal of having all new nonresidential buildings be zero net energy by 2030. The City can work toward this goal by constructing new municipal facilities to be more energy efficient than State or local regulations require, including achieving zero net energy in advance of the State’s target.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	Supportive	Supportive	Supportive

#### Recommended actions:

- Seek grant funding or low- or no-interest loans to implement energy saving efforts and renewable energy systems at municipal facilities at time of construction or substantial renovation.

#### Co-benefits:



Conserves resources



Reduces utility bills



Saves energy



# STRATEGIES TO ACHIEVE THE TARGET

## ME 2: Energy efficiency at existing municipal buildings

While San Mateo has conducted significant retrofits to existing municipal properties, additional opportunities for reducing energy use exist at City-owned facilities. The Sustainable Solutions Turnkey (SST) program has identified multiple HVAC and lighting retrofits at several City properties, including the Police Department, City Hall, multiple fire stations, and many others. This measure goes beyond the SST program (which is already accounted for as a planned activity) and looks at opportunities for retrofits at additional facilities or for additional retrofits not covered as part of other programs.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	10	30	40

### Recommended actions:

- Implement energy efficiency upgrades (including lighting and HVAC systems) at municipal buildings as needed.

### Co-benefits:



Conserves resources



Enhances local economy



Reduces utility bills



Saves energy



Although many City buildings have already been retrofitted, there are always opportunities to take advantage of new energy-saving technologies and practices. These municipal retrofits help reduce the amount of public money spent on utility bills, and also allow the City to pilot new ways to reduce energy use.

Photo by City of San Mateo



# CHAPTER 3

## ME 3: All-electric municipal buildings

Constructing new buildings or renovating existing ones to receive most or all their energy from electricity, as opposed to a mix of electricity and natural gas, has significant GHG savings. As the City encourages private property owners to construct mostly electric or all-electric buildings, it can set an example by constructing its new buildings and renovating existing spaces to use electricity only. If these all-electric buildings also have renewable energy and battery storage systems, they can also be protected against power grid failures and intentional shutoffs.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	130	200	270

### Recommended actions:

- As feasible, design and build all-electric municipal buildings and facilities, including electric heating, cooling, and water heating.
- Evaluate existing buildings and facilities to identify opportunities for retrofitting them to be all-electric, including electric heating, cooling, and water heating.
- During the development and construction of energy efficiency and renewable energy projects, also consider all-electric technology including electric heating, cooling, and water heating.
- Explore the feasibility of establishing microgrids at new or existing municipal facilities to capture the multiple benefits of microgrids, including reliability, clean energy, and cost savings.

### Co-benefits:



Conserves resources



Enhances local economy



Reduces utility bills

# STRATEGIES TO ACHIEVE THE TARGET

## Clean Transportation Fuels (CF)

The promotion of clean transportation fuels, such as electricity or hydrogen, can ease a transition away from reliance on vehicles fueled by gasoline or diesel fuel. Providing increased support for vehicles that use these clean transportation fuels through public and private infrastructure makes it easier for residents who want to purchase one of these vehicles.

### CF 1: Electric vehicle charging infrastructure

Widespread availability of electric vehicle (EV) charging stations is critical to ensuring that EV drivers can quickly and easily charge up their vehicles. This helps reduce both real and perceived barriers to EV adoption, increasing the rate of EV ownership in the community. A large number of appropriately located EV charging stations can also encourage EV drivers from other communities to stop in San Mateo, which can provide economic opportunities. The City can ensure that EV drivers are not challenged to find a charging station at both public and private facilities. With the passage of the Advanced Clean Trucks rule in 2020, the Advanced Clean Cars II rule in 2022 and the Advanced Clean Fleets rule in 2023, state regulations require all sales of new light-duty vehicles to be zero-emission by 2035 and sales of new medium-duty and heavy-duty vehicles to be zero-emission by 2036.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	24,420	49,390	69,780

#### Recommended actions:

- For each three-year code cycle, update reach codes to exceed the state-mandated minimum percentage of EV parking spaces designed to accommodate the future installation of electric vehicle supply equipment in new residential and commercial development, including the installation of supply equipment for heavy-duty EVs at appropriate commercial development.
- Promote incentives to encourage the expansion of EV charging infrastructure in existing public and private properties, including parking structures, hotels and motels, multi-unit dwellings, and workplaces.
- Partner with other agencies to incentivize property owners to install EV charging stations for light-duty and heavy-duty vehicles as appropriate.
- Install additional public EV charging stations in desirable, high-volume, and prominent City-owned locations.
- Encourage the expansion of appropriate light-duty and heavy-duty EV charging infrastructure in existing buildings.
- Encourage pairing EV charging infrastructure with battery storage systems.
- Explore options to reduce or eliminate permit fees for the installation of EV charging infrastructure.

## CHAPTER 3

### Co-benefits:



Conserves resources



Enhances local economy



Improves public health



Promotes equity



Dedicated areas for electric vehicle charging at residential complexes and businesses help encourage EV adoption, reducing GHG emissions from transportation.

*Photo by Dennis Schroeder/NREL (26765)*

# STRATEGIES TO ACHIEVE THE TARGET

## CF 2: Electric vehicle education and outreach

EVs, including plug-in hybrids (PHEVs) are becoming increasingly widespread and cost-effective to California residents. San Mateo can improve the adoption of EVs among City residents by promoting these vehicles through media and in-person events. The City can encourage property owners who are not required to install EV chargers to do so and can publicize the availability of incentives.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	4,910	8,030	12,360

### Recommended actions:

- Provide information about the benefits of EVs and PHEVs through the City’s electronic media systems and at public events, including creating opportunities for public EV/PHEV test drives.
- Conduct educational outreach to homeowners, commercial property owners, and developers about the benefits of EV charging stations.
- Identify and distribute resources to assist community members seeking to install an EV charging station on their properties.
- Work with local and regional partners to explore providing additional incentives to community members who purchase an EV or PHEV.
- Evaluate opportunities to regulate or incentivize transportation network companies (TNCs) to increase adoption of electric vehicles as regulatory conditions allow.

### Co-benefits:



Conserves resources



Improves public health



Promotes equity



# CHAPTER 3

## CF 3: Clean City fleet

San Mateo can further demonstrate its leadership on GHG reduction by increasing the number of vehicles in the municipal fleet that use clean transportation fuels. The City has already purchased vehicles that run off biomethane, a substitute for compressed natural gas (CNG) generated from waste products at the San Mateo Wastewater Treatment Plant. As EVs become more widely available, the City has more opportunities to replace its gasoline and diesel-fueled cars and trucks.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	130	200	270

### Recommended actions:

- Purchase EVs or PHEVs as replacements for gasoline, diesel, or conventional hybrid City fleet vehicles that have not been converted to compressed natural gas (CNG) vehicles, as available and cost-effective.
- Update the Vehicle and Fleet Equipment policy and explore an “Electric Vehicle First” procurement policy.

### Co-benefits:



Conserves resources



Improves public health



Methane is produced as a by-product of treating the community’s wastewater. The City collects this methane and processes it to produce a natural gas substitute called biomethane, which is used to fuel municipal vehicles. The City can expand its use of biomethane, as well as other clean fuels, to operate its fleet.

*Photo by City of San Mateo*

# STRATEGIES TO ACHIEVE THE TARGET

## CF 4: Clean fuel and vehicle emissions

Beyond electricity and biomethane, other clean vehicle fuels are available, such as hydrogen and biofuels from sustainable sources. Although these fuels are available in limited places and quantities, they are likely to become more widespread in coming years as California seeks to substantially cut GHG emissions from transportation. San Mateo can encourage adoption of these additional clean vehicle fuels by making it easier for fueling stations that supply them to locate in the community.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	4,210	16,920	26,360

### Recommended actions:

- Support efforts to build fueling stations in San Mateo for other clean fuels, including hydrogen and sustainably-sourced biofuels, as supported by market conditions.
- Explore ways to reduce vehicle idling in selected areas with large numbers of vehicle drop-offs and pick-ups, such as schools.
- Explore signal light optimization to reduce vehicle idling at traffic signals.

### Co-benefits:



Conserves resources



Enhances local economy



Improves public health



Promotes equity

# CHAPTER 3

## Sustainable Transportation (ST)

Increasing the number of transportation modes available to San Mateo residents creates a healthier community, promotes equity, and reduces emissions. By providing individuals with a range of safe, reliable options to get to work, school, shopping, and other important destinations that are more sustainable than personal vehicles, the City can ensure that other modes of transportation are a feasible and effective alternative. This reduces dependence on personal vehicles in San Mateo, improving mobility options for all community members.

### ST 1: Bicycle mode share

Bicycles currently make up an estimated 1.4 percent of San Mateo trips, using the approximately 62 miles of dedicated bike trails and lanes within the community. Efforts to increase this are currently under way, with the ongoing implementation of the Bicycle Master Plan, which was adopted in 2011 and updated in 2020. These efforts include dedicated bicycle parking, new bike lanes, and improvements to existing bicycle infrastructure, along with educational and outreach efforts. Such efforts are supported by the 2015 Sustainable Streets Plan, which includes standards for complete streets, and the 2019 Green Infrastructure Plan, which supports beneficial landscaping and other green infrastructure components that can make bicycling a more safe and pleasant experience.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	80	170	180

#### Recommended actions:

- Host bicycle safety and awareness efforts for bicyclists, pedestrians, and drivers.
- Support bike-to-school commutes through the Safe Routes to School program.
- Install bike racks and long-term bike storage lockers in the public right-of-way and at City facilities and transit facilities.
- Secure funding for design and construction of the infrastructure improvements identified in the updated Bicycle Master Plan.

#### Co-benefits:



Conserves resources



Enhances local economy



Improves public health



Promotes equity

# STRATEGIES TO ACHIEVE THE TARGET

## ST 2: Pedestrian mode share

The San Mateo Pedestrian Master Plan, adopted in 2012, seeks to create a pedestrian-friendly environment throughout the community to encourage walking and contribute to the community’s ambitious 2020 mode share target. By focusing new development in existing areas of higher density rather than low-density residential areas, San Mateo can support increased pedestrian activity by locating homes within walking distance of key facilities such as shops, offices, and schools. Such efforts are supported by the Sustainable Streets Plan and the Green Infrastructure Plan which includes standards for complete streets and pedestrian-friendly landscaping improvements such as low-impact development.



Pedestrian-friendly areas, such as Downtown San Mateo, encourage people to walk rather than drive.

Photo by City of San Mateo

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	110	120	130

### Recommended actions:

- Improve pedestrian safety through education and outreach efforts.
- Support walk-to-school efforts through the Safe Routes to School program.
- Secure funding for design and construction of the infrastructure improvements identified in the adopted Pedestrian Master Plan and Green Infrastructure Plan.

### Co-benefits:



Conserves resources



Enhances local economy



Improves public health



Promotes equity



# CHAPTER 3

## ST 3: Micromobility and shared mobility

Micromobility refers to the use of electric scooters, uni-skates, etc. to travel short distances. It is a growing trend for individuals to own their own personal micromobility devices to connect to transit and job centers. Shared mobility options, such as a bike share program, allow community members an easy way to make shorter trips without owning their own devices. People who do not have access to a bike, scooter, or other mobility device of their own can rent one from various private shared mobility operators. In 2019, San Mateo adopted a Shared Mobility Permit Program, establishing regulations that would allow these companies to begin operating in the community. Providing shared mobility devices helps make more sustainable transportation modes available to more people while ensuring that shared mobility companies operate in a safe and responsible manner.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	Supportive	Supportive	Supportive

### Recommended actions:

- Identify operators for a shared mobility program to provide first- and last-mile connections for residents and commuters.
- Work closely with shared mobility operator(s) to monitor program and encourage ridership.
- Support infrastructure improvements that encourage the use of personal micromobility devices in alignment with the updated Bicycle Master Plan.

### Co-benefits:



Conserves resources



Enhances local economy



Improves public health



Promotes equity

# STRATEGIES TO ACHIEVE THE TARGET

## ST 4: Public transit service

Multiple public transit providers operate in San Mateo, including the county-wide SamTrans bus network, the Caltrain commuter rail line between San Francisco and San Jose/Gilroy, and AC Transit’s bus connections to Hayward and Castro Valley. In partnership with these regional service providers, San Mateo can support efforts to increase the frequency and speed of transit service, improve the quality of public transit infrastructure, and support additional service as needed. Educational and incentive programs can also encourage people to increasingly use public transit, helping to get cars off the road and reducing congestion while simultaneously decreasing GHG emissions.



Improvements to San Mateo’s public transit service help reduce congestion as well as community GHG emissions.

Photo by PlaceWorks

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	3,610	5,660	6,910

### Recommended actions:

- Support the development of new rapid bus transit routes.
- Work with transit providers to improve the safety and comfort at transit stops.
- Work with Caltrain to improve the frequency of Caltrain services, particularly to the Hayward Park station.
- In partnership with transit providers, explore the feasibility of transit priority signals and other infrastructure improvements to speed up transit service.
- Increase ridership for public transit by enhancing pedestrian and bicycle access to high-quality transit and encourage incentive programs to decrease reliance on single-occupancy vehicles.

### Co-benefits:



Conserves resources



Enhances local economy



Improves public health



Promotes equity

# CHAPTER 3

## ST 5: Commuter programs

San Mateo’s efforts to encourage walking, bicycling, and public transit use can work in concert with other transit services, such as private shuttles and vanpools, to reduce vehicle trips associated with employee commutes. Existing businesses can encourage employees to adopt more sustainable commute options, including increased use of telecommuting, to reduce GHG emissions and congestion in the community. San Mateo’s existing Transportation Demand Management program can offer a model for how to reduce commute-related trips for existing businesses.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	Less than 10	70	160

### Recommended actions:

- Conduct an outreach campaign to San Mateo residents and employees about available shuttle and vanpool options to support increased use of these existing programs.
- Work with regional partners and employers to offer micro-transit services to provide first-mile and last-mile connections with key job and housing centers.
- Provide outreach for carpool incentive programs to San Mateo residents and employees.
- Encourage existing employers to participate in Transportation Demand Management efforts.
- Support efforts by employers to provide telecommuting as a viable option for appropriate employees.

### Co-benefits:



Conserves resources



Improves public health



Promotes equity

# STRATEGIES TO ACHIEVE THE TARGET

## ST 6: Transportation Demand Management

Transportation Demand Management (TDM) is a suite of strategies intended to reduce the amount of single-occupancy vehicle trips generated and vehicle miles traveled, particularly during peak commute times. TDM can include increased use of public transit, non-motorized transportation, carpools and ridesharing, and telecommuting, among many others. In San Mateo, new developments in the Hillsdale and Hayward Park transit-oriented development areas are required to reduce the number of trips they generate. The City is looking to establish similar requirements for significant new developments in the downtown area and can also encourage participation in TDM programs for developments in other parts of the communities. Developments implementing TDM measures generally have the freedom to choose the strategies that suit their needs.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	2,010	7,950	13,410

### Recommended actions:

- Require new developments of at least six multi-family units and/or 10,000 square feet of nonresidential space to implement a suite of TDM strategies to comply with the appropriate trip reduction target identified in applicable area plans.
- Require developments of at least 20 multi-family units and/or 50,000 square feet of nonresidential space undergoing additions or alterations (as defined in San Mateo Municipal Code Section 23.06.012) to implement TDM strategies consistent with the targets in relevant area plans.
- Educate developers working on projects in San Mateo not located in a TDM area about ways to reduce vehicle miles traveled and the resultant benefits.
- Publicize developments and businesses with successful TDM programs.
- Work with regional partners to fund successful TDM strategies for existing developments that can be implemented with little or no cost to property owners.

### Co-benefits:



Conserves resources



Improves public health



Promotes equity



# CHAPTER 3

## ST 7: Transit-oriented developments

Transit-oriented developments (TODs) are development projects located in areas close to high-quality transit services, such as commuter rail stations or bus stops with rapid and frequent service and are designed to encourage community members living and working in these projects to use public transit as an alternative to driving. Many TODs in San Mateo are in areas already covered by TDM requirements that also support reduced vehicle use. The City can also encourage TODs in other parts of the community, further decreasing congestion on local roads and highways.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	10,200	18,920	23,700

### Recommended actions:

- Increase transit-oriented developments along El Camino Real, within one-half mile of Caltrain stations, and in the Rail Corridor Transit Oriented Development and Hillsdale Station Area Plan areas.

### Co-benefits:



Conserves resources



Enhances local economy



Improves public health



Transit-oriented developments encourage community members to use public transit for many of their trips.

Photo by City of San Mateo

# STRATEGIES TO ACHIEVE THE TARGET

## Solid Waste (SW)

Efforts to divert waste away from landfills not only reduce emissions, but also provide residents with an opportunity to focus on comprehensive sustainability and exercising awareness of individual impact on the environment, including minimizing waste generation and encouraging source reduction. These measures build on the City of San Mateo's active leadership to date reducing waste through innovative programs.

### SW 1: Composting program

Decomposing landfill waste emits methane, which is a potent GHG. Diverting compostable materials from traditional waste streams may reduce these emissions. San Mateo and a number of other surrounding communities instituted a curbside composting program in 2011 in conjunction with the local waste hauler. This voluntary program allows residents and businesses to deposit food scraps into a green bin to be composted and turned into fertilizer. Previously, this material would have gone to the landfill, producing GHGs as it decomposed. Virtually all of San Mateo's single-family households currently participate in the program, along with some multi-family households and businesses. Increasing the participation rate of this program can decrease GHG emissions and help educate residents about waste generation.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	1,030	1,710	1,850

#### Recommended actions:

- Provide educational outreach materials to multifamily residents about urging HOA/property managers to support composting programs.
- Work with Recology San Mateo County to include information about adding composting services in monthly garbage and recycling bills to existing BizSMART customers.
- Work with food service facilities to understand barriers to using existing composting programs. Use this clearer perception of roadblocks to mitigate concerns and target incentives more specifically at high food-waste facilities.
- Work with multifamily and commercial property owners to minimize any potential health or cleanliness impacts associated with compost collection bins.
- Explore alternative off-site collection or sorting methods to capture compostable materials from multifamily units.
- Continue to provide a diversion discount to participating commercial and multifamily users to properly incentivize and fully use compost services.

# CHAPTER 3

## Co-benefits:



Conserves resources



Food waste and other organics is one of the most common materials in California's trash. Composting programs help keep this waste out of landfills, reducing GHG emissions and providing useful, nutrient-rich soil as a co-benefit.

*Photo by U.S. EPA*

# STRATEGIES TO ACHIEVE THE TARGET

## SW 2: Expanded recycling service

Beyond food waste and other organics, San Mateo residents can recycle many other types of materials. However, if materials are not placed in the correct bin, they may be accidentally landfilled, leading to increased GHG emissions. Proper sorting and other educational efforts can ensure that recyclable materials end up where they are supposed to. The City’s waste hauler may also be able to accept additional types of materials for recycling at a future time, depending on market conditions.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	6,070	7,730	8,820

### Recommended actions:

- Allow expanded recycling programs to accommodate additional material types as economic conditions allow.
- Improve educational efforts around proper waste sorting.

### Co-benefits:



Conserves resources



# CHAPTER 3

## SW 3: Waste awareness and source reduction

While it is important to sort waste properly and use recyclable/compostable products whenever possible, it is also helpful for community members to minimize the amount of materials that they throw away at all, regardless of the bin it ends up in. These efforts to decrease the overall amount of waste produced in the community not only decrease GHG emissions but can help keep harmful materials out of the environment and provide an opportunity for increased community education.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	2,080	4,050	5,590

### Recommended actions:

- Work with partners to establish a source reduction program.
- Work with partners to establish a materials reuse program.
- Explore a ban on specific types of single-use or disposable plastics.
- Work with waste haulers and the South Bayside Waste Management Authority to minimize recycling contamination.
- Continue to promote the Team Up to Clean Up program.
- Encourage local restaurants to partner with food rescue organizations to divert food that would otherwise be thrown away to non-profit organizations for distribution to those in need.

### Co-benefit:



Conserves resources



Enhances local economy

# STRATEGIES TO ACHIEVE THE TARGET

## Water and Wastewater (WW)

Increasing the efficiency of water usage reduces emissions and helps conserve valuable resources, saving money for the City and its residents, reducing dependence on outside resources, and increasing resilience to water shortages.

### WW 1: Water efficiency retrofits for existing buildings

Older buildings often have opportunities to improve water efficiency by replacing old fixtures (sinks, showerheads, toilets, etc.). Especially in periods of drought, optimizing indoor water efficiency may greatly reduce GHG emissions from conveyance and treatment of water. New buildings are required to use water-efficient fixtures under State law. These buildings can incorporate fixtures that exceed California standards to achieve additional water use reductions.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	170	300	360

#### Recommended actions:

- Provide educational materials and outreach to encourage indoor water conservation.
- Work with Cal Water and Bay Area Water Supply & Conservation Agency (BAWSCA) to promote rebate offerings for high efficiency toilets, washing machines, rain barrels, and other water-conserving appliances.
- Work with Cal Water to offer low-cost or free water audits to businesses and homeowners. Explore ways to encourage installation of greywater systems in existing buildings, especially as part of significant retrofits.

#### Co-benefits:



Conserves resources



Reduces utility bills

# CHAPTER 3

## WW 2: Water-efficient landscaping

Treating and conveying water requires large amounts of energy. Minimizing the amount of water used for nonessential applications, such as landscaping and turf grass, helps reduce GHG expenditures and increases resiliency in periods of drought.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	Less than 10	10	0

### Recommended actions:

- Provide educational materials to the community about drought-tolerant landscaping.
- Host educational workshops on drought-tolerant and native landscaping
- Partner with Cal Water and/or BAWSCA to host a trade-in program for inefficient sprinklers for more efficient drip irrigation systems.
- Retrofit City-owned landscapes to increase the amount of drought-resistant and/or native plant landscaping.

### Co-benefits:



Conserves resources



Reduces utility bills



**Water-efficient landscaping is an increasingly common choice throughout San Mateo to reduce water use and improve resilience to drought conditions.**

*Photos by City of San Mateo*

# STRATEGIES TO ACHIEVE THE TARGET

## WW 3: Water efficiency in new construction

The California Building Standards Code already requires new buildings to be highly water efficient. The City can encourage new buildings to go beyond these requirements to meet the voluntary standards in the California Green Building Code, improving community-wide water efficiency. San Mateo can also promote the availability of greywater systems, allowing water to be reused in a safe and hygienic way to further improve water efficiency.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	Less than 10	10	20

### Recommended actions:

- Adopt a reach code to require new developments to meet the voluntary indoor and outdoor water efficiency standards in the California Green Building Standards Code.
- Encourage developers to install greywater systems in new buildings at time of construction.

### Co-benefits:



Conserves resources



# CHAPTER 3

## Off-Road Equipment (OR)

Shifting to alternative fuel equipment across the community and promotes healthier air for all residents due to the reduction in gasoline or diesel fumes. This is especially important for sensitive populations such as children, the elderly, and individuals with chronic respiratory disease.

### OR 1: Clean fuel lawn and garden equipment

Most lawn and garden equipment, such as lawn mowers, leaf blowers, chippers, etc., are fueled by gasoline or diesel. Many manufacturers produce hybrid and electric models, which use less fuel compared to a conventional model (or none at all). These models produce less pollution and may also be quieter to operate than gasoline or diesel equipment.

	2030	2040	2045
GHG reduction (MTCO <sub>2</sub> e)	3,660	7,130	9,890

#### Recommended actions:

- Buy hybrid and alternative fuel models when purchasing new City-owned landscaping equipment, as feasible.
- Conduct education campaigns and outreach events to property owners and landscaping companies about the availability of hybrid and alternative fuel landscaping equipment, including electric equipment, and available incentives such as the BAAQMD Lawn Mower Exchange.

#### Co-benefits:



Conserves resources



Improves public health

# STRATEGIES TO ACHIEVE THE TARGET

## Summary of Total GHG Emissions

Collectively, the measures in this chapter achieve substantial GHG reductions for the years 2030, 2040, and 2045. **Table 13** shows the reductions achieved by topic, and **Figure 8** shows these reductions relative to San Mateo's community-wide emissions.

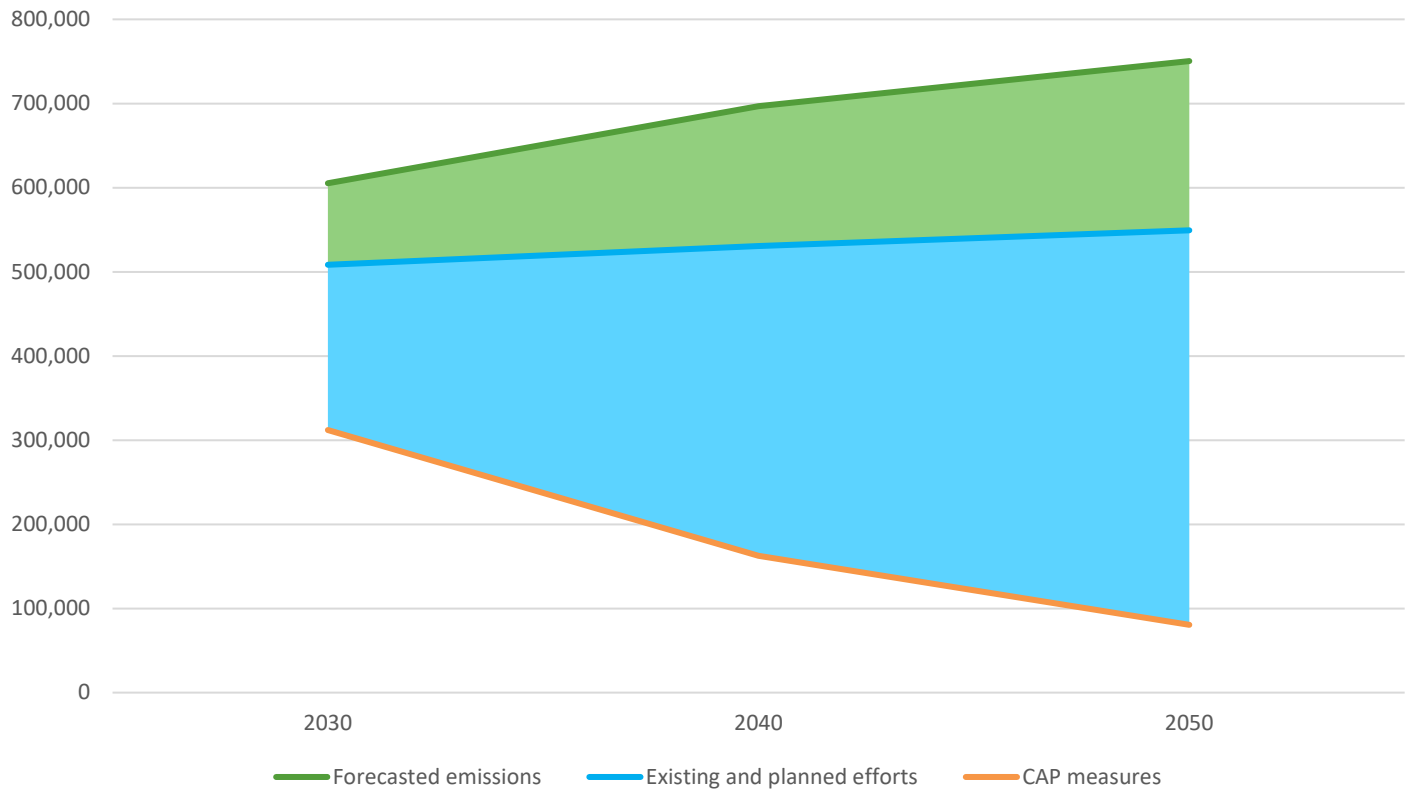
**Table 13: GHG Emissions Reductions by Measure Topic, 2030-2045 (MTCO<sub>2</sub>e)**

	2030	2040	2045
Building electrification	-123,280	-223,060	-268,510
Renewable energy	-290	-420	0
Energy efficiency	-9,960	-15,880	-20,170
Municipal energy efficiency and electrification	-140	-230	-310
Clean fuels	-33,670	-74,540	-108,770
Sustainable transportation	-16,010	-32,890	-44,490
Solid waste	-9,180	-13,490	-16,260
Water and wastewater	-170	-320	-380
Off-road equipment	-3,660	-7,130	-9,890
<b>Total</b>	<b>-196,360</b>	<b>-367,960</b>	<b>-468,780</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

## CHAPTER 3

**Figure 8: San Mateo GHG Emissions with Reduction Measures, 2030-2045 (MTCO<sub>2</sub>e)**



In total, this CAP is projected to reduce San Mateo's GHG emissions to 311,990 MTCO<sub>2</sub>e (45 percent below 1990 levels) by 2030, 162,530 MTCO<sub>2</sub>e by 2040 (71 percent below 1990 levels), and 80,550 MTCO<sub>2</sub>e (86 percent below 1990 levels) by 2045. These reductions allow San Mateo to meet its GHG reduction targets of 40 percent below 1990 levels (339,880 MTCO<sub>2</sub>e) by 2030, and 85 percent below 1990 levels (84,970 MTCO<sub>2</sub>e) by 2045.

It is likely that there will be new policies and regulations, technologies, personal and economic behaviors and preferences, and other factors that emerge in coming years. These factors cannot be accurately forecasted in this CAP, but they will likely be able to reduce GHG emissions beyond the level identified here. Future updates to the CAP will be able to better assess the GHG emission reductions from these factors and include them as part of San Mateo's GHG reduction strategy as appropriate. Future revisions to the CAP may include more stringent GHG reduction targets as they are feasible and appropriate.

## STRATEGIES TO ACHIEVE THE TARGET



Technologies such as autonomous vehicles have the potential to significantly affect future GHG emissions, but the full effect of this and other emerging technologies cannot be accurately forecasted at this time. Photo by PlaceWorks





## Chapter 4

# Implementation

### IMPLEMENTING THE CLIMATE ACTION PLAN

To ensure the success of the CAP, the City of San Mateo will integrate the goals and strategies of this plan into other local and regional plans, and implement the programs and activities identified herein. As the City moves forward with updating other planning documents such as the General Plan, the San Mateo Municipal Code, or specific plans, staff will ensure that these documents support and are consistent with the CAP.

Implementing the CAP will require City leadership to execute these measures and report progress. This plan identifies a work plan that includes responsible departments, time frames, and relative costs associated with each measure. Staff will monitor progress using an implementation and monitoring tool on an annual basis and will provide an annual update to City decision-makers. The measures in this CAP are accompanied by a list of recommended actions, selected by City staff, members of the Sustainability and Infrastructure Commission, and members of the public. The list of recommended actions represents suggested means of achieving the measure; however, these actions are not a prescriptive path to implementation. Furthermore, not all of the listed actions may be necessary for the City to achieve its target. Due to ongoing changes in technology and regulations, and the emergence of new best practices and funding opportunities, this approach enables the City to adapt and leverage new opportunities or partnerships without being constrained by a specific implementation pathway. The City's sustainability program manager will serve as an ongoing advisor for CAP implementation. As part of annual progress reports, the sustainability program manager and City staff will evaluate the effectiveness of each measure to ensure that anticipated emissions reductions are occurring. If reductions do not occur as expected, the City can modify and add additional measures to the CAP to ensure the reduction target is achieved.



The following programs are designed to guide San Mateo in successfully implementing the CAP.

## IMPLEMENTATION MEASURES

### **Implementation Measure 1: Monitor and report progress toward Climate Action Plan target achievement on an annual basis.**

Actions to support Implementation Measure 1:

- Assign responsibility for facilitating and supporting CAP implementation to the City's sustainability program manager.
- Identify key staff from each department responsible for supporting the sustainability program manager with information and updates for annual reporting and monitoring.
- Continue to involve the Sustainability and Infrastructure Commission or other advisory bodies in reviewing and recommending CAP action items.
- Prepare an annual progress report on implementation of the recommended GHG reduction measures for review and consideration by the Sustainability and Infrastructure Commission and City Council. When information is available, provide updates on estimated GHG emissions reductions and current GHG emissions levels.
- Use the CAP implementation and monitoring tool to track GHG benefits from CAP implementation and identify progress toward the CAP reduction target.

### **Implementation Measure 2: Continue collaborative partnerships with agencies and community groups that support Climate Action Plan implementation.**

Action to support Implementation Measure 2:

- Continue formal membership and participate in local and regional organizations that provide tools and support for energy efficiency, energy conservation, GHG emissions reductions, adaptation, public information, and implementation of this Plan.
- Participate as a member of the Regionally Integrated Climate Action Planning Suite (RICAPS) climate action planning effort to monitor available resources, programs, and funding to leverage with City CAP efforts.
- At the direction of the City Council, commit to formal membership through joint powers authorities or other partnerships to implement high priority measures from the CAP.
- Provide policy input to partner agencies (e.g., League of Cities) on policy barriers that need to be addressed at the state level.

# CHAPTER 4

## Implementation Measure 3: Secure necessary funding to implement the Climate Action Plan.

Actions to support Implementation Measure 3:

- Identify funding sources and levels for reduction measures as part of annual reporting.
- Include emissions reduction measures in department work plans, the capital improvement program, and other plans as appropriate.
- Pursue local, regional, State, and federal grants to support implementation.
- Explore dedicated funding sources for CAP implementation.
- Explore opportunities to allocate a portion of revenues from revenue-generating measures to CAP allocation.

## Implementation Measure 4: Continue to update the baseline emissions inventory and Climate Action Plan every five years.

Actions to support Implementation Measure 4:

- Prepare a 2021 emissions inventory no later than 2024.
- Update the CAP no later than 2025 to incorporate new technology, practices, and other options to further reduce emissions.

### WORK PLAN

The work plan in **Table 14** contains information to support staff and community implementation of the measures to effectively integrate them into budgets, the capital improvement program, and other programs and projects. Information about the sources of data to monitor implementation of each measure is given in **Appendix 2**. The measures of success included in **Table 14** are defined as follows:

**Code:** The abbreviation that is used to refer to the measure in the CAP and all corresponding workbooks.

**Measure:** The language used to guide actions needed for reductions.

**GHG Reductions (MTCO<sub>2</sub>e):** Amount of GHG emissions reduced by 2020, 2030, and 2050.

**City Staff Time:** The estimated cost to the City (in staff hours) to complete implementation of the measure, ranked as follows:

- Low (less than 80 hours)
- Medium (80–500 hours)
- High (more than 500 hours)

**Time Frame:** The year by which a measure should be effective by year's end. The exact status of a measure will vary based on its actions, and many measures will be ongoing through and beyond 2030. An effective measure is one that will be actively on track to achieve its targeted GHG emissions reductions, support adaptation to climate change effects, or achieve long-term resilience. For a measure to be effective, the necessary programs and efforts should be active, and any infrastructure or other capital improvements should be in place. The effective year is not the end year, as many of the measures are programs that are intended to remain in effect for the foreseeable future, and so they do not have end dates. Time frames for effectively setting up the measures are described as follows:

- Immediate (by 2024)
- Near-Term (by 2025)
- Mid-Term (by 2027)
- Long-Term (by 2030)

**Lead Department:** The lead City department tasked with implementing the measure.



# CHAPTER 4

**Table 14: CAP Implementation Work Plan**

Measure	Measure	2030 GHG Reduction (MTCO <sub>2</sub> e)	2040 GHG Reduction (MTCO <sub>2</sub> e)	2045 GHG Reduction (MTCO <sub>2</sub> e)	City Staff Time	Time Frame	Lead Department(s)
BE 1	All-electric new construction	-21,070	-38,450	-47,250	Medium	Near-term	City Manager's Office, Community Development
BE 2	All-electric existing buildings	-102,210	-184,610	-221,260	High	Near-term	City Manager's Office, Community Development
RE 1	Peninsula Clean Energy	-160	-170	0	Low	Immediate	City Manager's Office
RE 2	Renewable energy systems for new and existing residences	-70	-160	0	Medium	Immediate	City Manager's Office, Community Development
RE 3	Renewable energy systems for new and existing nonresidential buildings	-60	-90	0	Medium	Immediate	City Manager's Office, Community Development
EE 1	Residential energy efficiency retrofits	-6,160	-7,020	-6,790	High	Near-term	City Manager's Office, Community Development
EE 2	Nonresidential energy efficiency retrofits	-3,800	-8,860	-13,380	High	Near-term	City Manager's Office, Community Development
EE 3	Residential tree planting	Less than -10	Less than -10	Less than -10	Low	Mid-term	City Manager's Office, Parks and Recreation

# IMPLEMENTATION

Measure	Measure	2030 GHG Reduction (MTCO <sub>2</sub> e)	2040 GHG Reduction (MTCO <sub>2</sub> e)	2045 GHG Reduction (MTCO <sub>2</sub> e)	City Staff Time	Time Frame	Lead Department(s)
ME 1	Energy efficiency for new municipal buildings	Supportive	Supportive	Supportive	Medium	Mid-term	City Manager's Office, Public Works
ME 2	Energy efficiency at existing municipal buildings	-10	-30	-40	Medium	Near-term	City Manager's Office, Public Works
ME 3	All-electric municipal buildings	-130	-200	-270	Medium	Long-term	City Manager's Office, Public Works
CF 1	Electric vehicle charging infrastructure	-24,420	-49,390	-69,780	High	Immediate	City Manager's Office, Community Development, Public Works
CF 2	Electric vehicle education and outreach	-4,910	-8,030	-12,360	High	Immediate	City Manager's Office, Community Development
CF 3	Clean City fleet	-130	-200	-270	Low	Near-term	Public Works
CF 4	Clean fuel	-4,210	-16,920	-26,360	Medium	Long-term	City Manager's Office, Community Development, Public Works
ST 1	Bicycle mode share	-80	-170	-180	Medium	Mid-term	Community Development, Public Works

## CHAPTER 4

Measure	Measure	2030 GHG Reduction (MTCO <sub>2</sub> e)	2040 GHG Reduction (MTCO <sub>2</sub> e)	2045 GHG Reduction (MTCO <sub>2</sub> e)	City Staff Time	Time Frame	Lead Department(s)
ST 2	Pedestrian mode share	-110	-120	-130	Low	Near-term	Community Development, Public Works
ST 3	Micromobility and shared mobility	Supportive	Supportive	Supportive	Low	Near-term	City Manager's Office, Public Works
ST 4	Public transit service	-3,610	-5,660	-6,910	Medium	Near-term	City Manager's Office, Public Works
ST 5	Commuter programs	0	-70	-160	High	Mid-term	City Manager's Office, Community Development, Public Works
ST 6	Transportation Demand Management	-2,010	-7,950	-13,410	Medium	Immediate	Community Development, Public Works
ST 7	Transit-oriented development	-10,200	-18,920	-23,700	Low	Near-term	Community Development
SW 1	Composting program	-1,030	-1,710	-1,850	High	Immediate	Public Works
SW 2	Expanded recycling service	-6,070	-7,730	-8,820	High	Near-term	Public Works
SW 3	Waste awareness and source reduction	-2,080	-4,050	-5,590	Medium	Near-term	City Manager's Office, Public Works

## IMPLEMENTATION

Measure	Measure	2030 GHG Reduction (MTCO <sub>2</sub> e)	2040 GHG Reduction (MTCO <sub>2</sub> e)	2045 GHG Reduction (MTCO <sub>2</sub> e)	City Staff Time	Time Frame	Lead Department(s)
WW 1	Water efficiency retrofits for existing buildings	-170	-300	-360	Medium	Mid-term	Public Works
WW 2	Water-efficient landscaping	Less than -10	Less than -10	Less than -10	Low	Near-term	Public Works
WW 3	Water efficiency in new construction	0	-10	-20	Medium	Mid-term	Community Development
OR 1	Alternative fuel lawn and garden equipment	-3,660	-7,130	-9,890	Medium	Mid-term	City Manager's Office, Parks and Recreation





## Glossary

**Activity:** Any action that directly or indirectly results in GHG emissions. Examples include electricity use, vehicle use, and solid waste disposal. Activity data are a discrete measure of how much of an activity occurred in San Mateo in a certain year (e.g., how much electricity was used in 2015). The measurement unit of activity data varies depending on the activity.

**Assembly Bill (AB) 32, California Global Warming Solutions Act of 2006:** Establishes a comprehensive program of regulatory and market mechanisms to achieve real, quantifiable, cost-effective reductions of greenhouse gases (GHG) for the State of California. AB 32 designates the California Air Resources Board as the responsible agency for monitoring and reducing statewide GHG emissions to reduce emissions to 1990 levels by 2020.

**Assembly Bill (AB) 1279, California Climate Crisis Act of 2022:** Revises the GHG targets established in AB 32 and declares the policy of the state both to achieve net-zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide human-caused GHG emissions are reduced to at least 85 percent below 1990 levels.

**Association of Bay Area Governments (ABAG):** The regional planning agency for the nine counties and 101 incorporated cities in the San Francisco Bay Area.

**Baseline year:** The year against which future changes are measured. Many communities in California use a baseline year of 2005 through 2008 for consistency with AB 32; the San Mateo inventory uses a baseline year of 2005.



**Building electrification:** Replacing some or all of a building’s natural gas-powered appliances or machinery with models that run on electricity. Since electricity releases much fewer GHGs (and in some cases no GHGs at all), there is a significant GHG reduction benefit. Building electrification is also called “fuel switching”.

**California Air Resources Board (CARB):** A division of the California Environmental Protection Agency charged with protecting public health, welfare, and ecological resources through the reduction of air pollutants.

**California Environmental Quality Act (CEQA):** A State law requiring State and local agencies to regulate activities with consideration for environmental protection. If a proposed activity has the potential for a significant adverse environmental impact, an environmental impact report (EIR) must be prepared and certified as to its adequacy before action can be taken on the proposed project. General plans require the preparation of a program EIR.

**California Green Building Standards Code (CALGreen, Title 24 Part 11):** The California Green Building Standards Code, commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics.

**Carbon dioxide (CO<sub>2</sub>):** A colorless, odorless gas that occurs naturally in the earth’s atmosphere. Significant quantities are also emitted into the air by fossil fuel combustion.

**Carbon dioxide equivalent (CO<sub>2</sub>e):** A metric measure used to compare the emissions from various greenhouse gases based on their global warming potential (GWP). The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP.

**Clean Car Fuel Standards (AB 1493, Pavley):** Signed into law in 2002 and commonly referred to as Pavley standards. Requires carmakers to reduce greenhouse gas (GHG) emissions from new passenger cars and light trucks beginning in 2011. An updated set of standards, called the Advanced Clean Car Standards, took effect in 2016 and requires further GHG reductions from new vehicles. A further set of standards, called the Advanced Clean Car II Standards, will take effect in 2026 and will lead to all new light-duty vehicles being zero-emission starting in 2035.

**Climate Action Plan (CAP):** Strategic plans that establish policies and programs for reducing (or mitigating) a community’s greenhouse gas emissions.

# GLOSSARY

**Climate change:** The term “climate change” is sometimes used to refer to all forms of climatic inconsistency, but because the earth’s climate is never static, the term is more properly used to imply a significant change from one climatic condition to another.

**Co-benefit:** An additional benefit occurring from the implementation of a greenhouse gas (GHG) reduction measure that is not directly related to reducing GHG emissions.

**Complete streets:** Complete streets policies ensure that transportation planners and engineers consistently design and operate the entire roadway with all potential users in mind. This includes private vehicles, bicyclists, public transportation vehicles and riders, and pedestrians of all ages and abilities.

**Emissions factor:** A number that describes the amount of greenhouse gases (GHG) released per unit of a certain activity (e.g., GHGs per unit of natural gas used). Factors are provided by utility companies, State agencies, and guidance documents.

**Energy conservation:** Reducing energy waste, such as turning off lights, heating, and motors when not needed.

**Energy efficiency:** Doing the same or more work with less energy, such as replacing incandescent light bulbs with compact fluorescent light bulbs or buying an Energy Star appliance to use less energy for the same or greater output.

**Energy efficiency standards (Title 24 Part 6):** California’s energy efficiency standards, also called the California Energy Code (Part 6 of Title 24, the California Building Standards Code), were first adopted in 1978 and established minimum energy efficiency standards for residential and nonresidential buildings. These standards are updated every few years by providing more stringent energy budgets for new buildings to reduce California’s energy consumption, eventually working toward a zero-net energy standard for new construction.

**Energy Star:** A joint program of the US Environmental Protection Agency and the US Department of Energy to provide consumers with information and incentives to purchase the most energy efficient products available.

**Environmental Impact Report (EIR):** A report required by the California Environmental Quality Act that assesses all the environmental characteristics of an area and determines what effects or impacts will result if the area is altered or disturbed by a proposed action or project. See California Environmental Quality Act.

**Global warming potential (GWP):** An index used to translate the level of emissions of various gases into a common measure to compare the relative potency of different gases without directly calculating the changes in atmospheric concentrations. Greenhouse gases are expressed in terms of carbon dioxide equivalent. Global warming potentials are expressed in terms relative to carbon dioxide, which has a global warming potential of 1.

**Green building:** Sustainable or “green” building is a holistic approach to design, construction, and demolition that minimizes the building’s impact on the environment, the occupants, and the community. See the California Green Building Standards Code (CALGreen) for green building regulations in California.

**Greenhouse gas/gases (GHG):** Gases that cause heat to be trapped in the atmosphere, warming the earth. GHGs are necessary to keep the earth warm but increasing concentrations of these gases are implicated in global climate change. GHGs include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. The majority of GHGs come from natural sources, although human activity is also a major contributor.

**Greenhouse gas (GHG) inventory:** Provides estimates of the amount of GHGs emitted to and removed from the atmosphere by human activities. A city or county that conducts an inventory looks at both community emissions sources and emissions from government operations. A base year is chosen and used to gather all data from that year. Inventories include data collection from such things as vehicle miles traveled, energy usage from electricity and gas, and waste.

**Greywater:** Wastewater collected from showers, bathtubs, dishwashers, bathroom sinks, and clothes washing machines that is reused on-site for irrigation and other non-potable (i.e., non-drinkable) purposes.

**Metropolitan Planning Organization (MPO):** A federally funded transportation planning organization comprising representatives from local government agencies and transportation authorities.

**Metropolitan Transportation Commission (MTC):** The MPO for the nine-county San Francisco Bay Area. It is responsible for securing and distributing funding for transportation planning and construction projects, working with local and regional public transit providers to improve the effectiveness of service, and encouraging development within existing urbanized areas to minimize the loss of agriculture and open space. It also operates the region’s seven state-owned toll bridges and the Clipper transit fare card.

**Micromobility:** A mode of transportation that uses lightweight, usually powered, devices, such as electric scooters, electric-assist bicycles, and electric skateboards.

**Mixed-fuel building:** A building that uses multiple sources of energy to operate appliances and devices. In most of California, including San Mateo, this refers to buildings that use both electricity and natural gas.

**Peninsula Clean Energy (PCE):** A community choice aggregation program run by the local governments of San Mateo County to provide electricity to San Mateo County community members. PCE purchases electricity on behalf of its customers and distributes it through existing power lines owned by PG&E. It is the default electricity supplier for San Mateo County.



# GLOSSARY

**Quantification:** The process of determining the amount of greenhouse gas emissions reduced by each measure.

**Recycled water:** Wastewater from tubs, toilets, and sinks inside homes and offices that is cleaned through a treatment process, producing non-potable water that is safe for landscapes, raw vegetable crops, and agricultural crops.

**Reduction measure:** A goal, strategy, program, or set of actions that target and reduce a specific source of greenhouse gas emissions.

**Regional Transportation Plan (RTP):** A long-term blueprint of the region's transportation systems. The RTP is a federally mandated comprehensive long-range regional planning document that identifies the region's transportation needs, sets forth an action plan of projects, determines actions and programs to address the needs and issues, and documents the financial resources needed to implement the RTP. Plan Bay Area, the combined RTP and SCS for the nine-county San Francisco Bay Area, was last adopted in 2017.

**Renewable energy:** Energy from sources that regenerate and are less damaging to the environment, such as solar, wind, biomass, and small-scale hydroelectric power.

**Renewables Portfolio Standard (RPS):** A regulation requiring utility companies in California to increase the production of renewable energy from solar, wind, or biomass, or geothermal sources.

**Sector:** A category of activities responsible for greenhouse gas (GHG) emissions, such as transportation, water use, or energy use. Sectors may comprise multiple GHG sources and activities.

**Senate Bill (SB) 97:** Requires lead agencies to analyze greenhouse gas emissions and climate change impacts under the California Environmental Quality Act.

**Senate Bill (SB) 375:** Directs the metropolitan planning organizations in California to create a sustainable communities strategy (SCS) as part of the regional transportation plan. The SCS will demonstrate how the region will achieve the 2020 and 2035 greenhouse gas emissions reduction targets for the region set by the California Air Resources Board.

**Senate Bill (SB) 1383:** Requires businesses and residents to separate their organic waste from other waste streams for recycling or composting with a target for reducing organic waste disposal in landfills by 75 percent by 2025. Requires local jurisdictions to implement organic waste recycling programs to meet these goals.

**Shared mobility:** A means of transportation using shared devices, such as bicycles and scooters, that users rent for short periods of time.

**Sustainability:** Community use of natural resources in a way that does not jeopardize the ability of future generations to live and prosper.

**Sustainable Communities Strategy (SCS):** The land use element of each metropolitan planning organization's regional transportation plan as required by Senate Bill 375. The SCS will demonstrate how the region will achieve the 2020 and 2035 vehicle miles traveled and greenhouse gas emissions reduction targets for the region set by the California Air Resources Board. Plan Bay Area, the combined RTP and SCS for the nine-county San Francisco Bay Area, was last adopted in 2017.

**Sustainable development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

**Transit-oriented development (TOD):** A mixed-use residential or commercial area designed to maximize access to transit options.

**Transportation demand management (TDM):** A voluntary or mandatory program developed by local agencies, large employers, or high traffic commercial services to limit the amount of congestion and pollution related to transportation demand. TDM plans may include incentives, regulations, and education about transportation alternatives.

**Transportation network company (TNC):** A company whose service allows users to request an on-demand ride from drivers using their own personal vehicles to transport users. Lyft and Uber are the most prominent examples.

**Vehicle miles traveled (VMT):** A key measure of overall street and highway use. Reducing VMT is often a major objective in efforts to reduce vehicular congestion and achieve regional air quality goals.

**Water conservation:** Reducing water use, such as by turning off taps, shortening shower times, and reducing outdoor irrigation demand.

**Water-efficient landscape:** Native or low-water-using landscapes. Water-efficient landscapes are required by law in all cities and counties in California to conserve water.

**Water use efficiency:** Replacing older technologies and practices in order to accomplish the same results with less water, for example, by replacing toilets with new high efficiency models and by installing "smart controllers" in irrigated areas.

**Zero net energy:** Generating as much energy as is used, over the course of a year. For example, a zero net energy building will generate as much energy on-site as it uses annually.

# GLOSSARY



# City of San Mateo Climate Action Plan



## Works Cited

This list is a general list of sources used to broadly inform preparation of the CAP. **Appendix A** lists the sources used to specifically quantify individual GHG reduction measures.

Bay Area Air Quality Management District. 2022. "California Environmental Quality Act: Pre-release Version of Appendix C Guidance for GHG Reduction Strategies."

———. 2022. "Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans."

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

California Air Resources Board. 2011. "Local Government Operations Protocol for Greenhouse Gas Assessments." <https://ww3.arb.ca.gov/cc/protocols/localgov/localgov.htm>.

———. 2022. "AB 32 Scoping Plan." <https://ww3.arb.ca.gov/cc/scopingplan/scopingplan.htm>.

California Energy Commission. "Cal-Adapt." <https://cal-adapt.org/>.

California Governor's Office of Emergency Services, California Energy Commission, and California Natural Resources Agency. "California's Fourth Climate Change Assessment." <http://www.climateassessment.ca.gov/>.

City of San Mateo. 2015. *San Mateo 2015 Climate Action Plan*. <https://www.cityofsanmateo.org/DocumentCenter/View/65426/San-Mateo-CAP---Adopted?bidId=>.





# WORKS CITED

———. 2020, 2021, and 2022. "CAP Progress Updates." <https://www.cityofsanmateo.org/3962/CAP-Progress-Updates>.

County of San Mateo. 2019. "RICAPS Program." <https://performance.smcgov.org/stories/s/RICAPS/xzkp-fn3v/>.

ICLEI Local Governments for Sustainability USA. 2012. US Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions. <http://www.icleiusa.org/tools/ghgprotocol/community-protocol>.

Intergovernmental Panel on Climate Change. 2013. IPCC Fifth Assessment Report: Climate Change 2013: The Physical Science Basis. <http://www.ipcc.ch/report/ar5/wg1/>.



## Appendix 1:

# Technical Appendix: Methods and Assumptions

### GHG REDUCTION MEASURE QUANTIFICATION

This appendix summarizes data sources, assumptions, and performance metrics used to calculate greenhouse gas emissions reductions for the City of San Mateo Climate Action Plan. The sources and metrics are organized by measure and rely on four primary types of data and research: (1) San Mateo's GHG emissions inventory and forecast, (2) government agency tools and reports, (3) case studies in similar jurisdictions, and (4) scholarly research.

Further, the quantification approaches are consistent with guidance provided by the Bay Area Air Quality Management District (BAAQMD) for development of a Qualified GHG Reduction Strategy. The baseline GHG inventory and forecast serve as the foundation for the quantification of the City's GHG reduction measures. Activity data from the inventory form the basis of measure quantification, including vehicle miles traveled (VMT), kilowatt-hours (kWh) of electricity or therms of natural gas consumed, and tons of waste disposed. Activity data were combined with the performance targets and indicators identified by the City and consultants. The activity data and performance targets and indicators were used throughout the quantification process to calculate the



# APPENDIX 1

emissions reduction benefit of each measure. This approach ensures that San Mateo's GHG emissions reductions are tied to the baseline and to future activities occurring within the City.

## Emissions Factors

**Table 1-1** lists the emissions factors used to quantify emissions reductions in the CAP. These emission factors reflect the GHG reductions from existing and planned accomplishments, as well as PCE, to the extent feasible. They do not reflect the average emission factors with full implementation of this CAP.

**Table 1-1: Emissions Coefficients for CAP Measures**

Source	2005	2019	2030	2040	2045	Source
MTCO <sub>2</sub> e per mile driven (with Pavley)	0.000464	0.000392	0.000312	0.000277	0.000269	EMFAC 2021
MTCO <sub>2</sub> e per Caltrain passenger mile	0.004371	0.002506	0.000629	0.000627	0.000626	Caltrain, US Community Protocol
MTCO <sub>2</sub> e per kWh (PCE)	-	0.000045	0.000000	0.000000	0.000000	PCE, US EPA
MTCO <sub>2</sub> e per kWh (PG&E)	0.000223	0.000002	0.000002	0.000001	0.000000	PG&E, US EPA
MTCO <sub>2</sub> e per kWh (direct access)	0.000057	0.000212	0.000152	0.000095	0.000000	CEC, US EPA
MTCO <sub>2</sub> e per kWh (weighted community average)	0.000160	0.000054	0.000010	0.000006	0.000000	PCE, PG&E, CEC, US EPA
MTCO <sub>2</sub> e per therm	0.005292	0.005319	0.005319	0.005319	0.005319	US Community Protocol
MTCO <sub>2</sub> e per ton of waste	0.207521	0.253266	0.236134	0.236134	0.236134	CARB Landfill Emissions Tool v1.3

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

These emissions coefficients were calculated as follows, using data from the GHG inventory and forecast:

- **MTCO<sub>2</sub>e per mile driven:** Divide the emissions from on-road transportation by the number of on-road vehicle miles traveled.
- **MTCO<sub>2</sub>e per passenger mile:** For Caltrain, divide the emissions from Caltrain activities related to San Mateo by the number of passenger miles attributed to San Mateo.
- **MTCO<sub>2</sub>e per kWh:** Divide the sum of the emissions for residential and commercial electricity use by the sum of the kWh for these two sources, for each electricity provider.
- **MTCO<sub>2</sub>e per therm:** Divide the sum of the emissions from residential and commercial natural gas by the sum of the therms used by these two sources.
- **MTCO<sub>2</sub>e per ton of waste:** Divide the sum of the emissions from landfilled waste and waste in place by the sum of the tons of waste in these sources.

## TECHNICAL DATA FOR EXISTING AND PLANNED LOCAL AND REGIONAL ACTIVITIES

Data sources, methods, and assumptions for the quantification of the existing and planned local and regional activities are provided below. Note that some existing and planned local activities may not have assumptions and/or performance metrics. The GHG reductions shown for existing and planned local and regional activities are only in addition to any reductions achieved by existing or planned State efforts.

### Peninsula Clean Energy

#### GHG Reduction

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	20,000	13,750	0

#### Performance Indicators

	2030	2040	2045
Electricity supplied by PCE (kWh)	495,153,490	487,569,650	501,096,050
PCE electricity supplied to ECO100 customers (kWh)	27,614,500	27,614,500	27,614,500



# APPENDIX 1

## GHG Method

For overall electricity supplied by PCE, the project team identified the current fraction of community electricity supplied by PCE and applied this ratio to future projections of electricity use. The team subtracted the amount of PCE-supplied electricity in 2020 from this future projection to obtain the increase in PCE electricity supplies, then multiplied this value by an emissions factor that reflects PCE's future energy procurement plans. For ECO100, the project team identified how much electricity is served to ECO100 and applied an emissions factor that reflects the community's weighted average of electricity sources to determine the overall amount of averted emissions.

## GHG Sources

California Energy Commission. 2023. *2019 Power Content Label: Peninsula Clean Energy*.  
<https://www.energy.ca.gov/filebrowser/download/3244>.

Dobrovskaya, M. 2023. Peninsula Clean Energy. Personal communication to A. Chow, City of San Mateo. April 19.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Energy-efficiency retrofits

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	136,470	136,470	136,470
Natural gas savings (therms)	5,910	5,910	5,910
Emissions reduction (MTCO <sub>2</sub> e)	30	30	30

### GHG Method

The project team collected data on the savings from energy efficiency retrofits, as reported by the San Mateo County Energy Watch and BayREN. The team then multiplied these values by the appropriate emissions factor in order to calculate GHG reductions.

### GHG Sources

City of San Mateo. 2021. *Climate Action Plan Progress Report*.  
<https://sanmateo.primegov.com/Portal/viewer?id=4766&type=2>

# APPENDIX 1

## Solar energy installation

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	5,695,620	5,695,620	5,695,620
Emissions reduction (MTCO <sub>2</sub> e)	20	10	0

### GHG Method

The project team obtained data on the number and generation potential of new solar energy installations in San Mateo. The team then used a National Renewables Energy Laboratory tool to determine how much electricity can be produced in San Mateo, on average, per kilowatt of generation potential, and calculated the total electricity generated annually from these installations. The project team applied a weighted average community electricity emissions factor to this total to determine GHG reductions.

### GHG Sources

California Solar Initiative. 2023. "California Distributed Generation Statistics."  
<https://www.californiadgstats.ca.gov/downloads/>

City of San Mateo. 2022. *Climate Action Plan Progress Report*.  
<https://sanmateo.primegov.com/Portal/viewer?id=6472&type=2>

National Renewable Energy Laboratory. n.d. "PVWatts Calculator." <https://pwwatts.nrel.gov/>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Municipal energy-efficiency retrofits

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	1,831,170	1,831,170	1,831,170
Natural gas savings (therms)	22,870	22,870	22,870
Emissions reduction (MTCO <sub>2</sub> e)	160	160	160

### GHG Method

The project team reviewed the results of the energy efficiency analysis provided by PG&E, which identifies anticipated electricity and natural gas savings from implementing the SST retrofits. The team applied the appropriate electricity and natural gas emissions factor to determine the overall GHG reduction.

### GHG Sources

City of San Mateo. 2021. *Climate Action Plan Progress Report*.  
<https://sanmateo.primegov.com/Portal/viewer?id=4766&type=2>



# APPENDIX 1

## Public-access EV chargers

### GHG Reduction

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	Less than 10	Less than 10

### Performance Indicators

	2030	2040	2045
Net increase in EV VMT	258,720	258,720	258,720
Net increase in electricity use (kWh)	87,960	87,960	87,960

### GHG Method

The project team collected information on the number of public EV chargers in San Mateo and used factors about the average charging use of public EV chargers to estimate how many VMT of EV use the public chargers in the community support annually. The project team then estimated the electricity use from these EV chargers. Next, the team applied the appropriate emissions factors to the VMT and electricity use figures and took the difference between the two as the net reduction in GHG emissions.

### GHG Sources

Chow, A. 2023. City of San Mateo. Personal communication to E. Krispi, PlaceWorks. April 14.

ICLEI – Local Governments for Sustainability. n.d. Climate and Air Pollution Planning Assistant v 1.5.

US Environmental Protection Agency. n.d. "Interactive Version of the Electric Vehicle Label." <https://www.epa.gov/fueleconomy/interactive-version-electric-vehicle-label>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Transportation Demand Management

### Activity and GHG Reduction

	2030	2040	2045
Transportation savings (VMT)	725,620	700,370	687,710
Emissions reduction (MTCO <sub>2</sub> e)	190	170	160

### GHG Method

The project team obtained information from the San Mateo Rail Corridor Area Transportation Management Agency to identify the mandatory reductions in trip generation as a result of existing and under-construction developments subject to TDM provisions and combined this information with results from the inventory and forecast to estimate the decrease in VMT resulting from TDM. The project team applied the community-wide VMT emissions coefficient to this figure to determine the GHG reductions.

### GHG Sources

Lim, L. 2019. City of San Mateo. Personal communication to A. Chow, City of San Mateo. January 3.

# APPENDIX 1

## Additional Bicycle Lanes

### Activity and GHG Reduction

	2030	2040	2045
VMT savings	97,990	111,570	119,050
Emissions reduction (MTCO <sub>2</sub> e)	30	30	30

### Performance Indicators

	2030	2040	2045
Additional bicycle lanes (miles)	6.4	6.4	6.4

### GHG Method

The project team reviewed the Bicycle Master Plan showing the increase in bicycle lanes planned for 2020 along with the number of bicycle lanes that have been constructed since the 2019 inventory. The team used this information and the proposed methodology from the California Air Pollution Control Officers Association to calculate the percentage decrease in VMT associated with an increase in bicycle lanes and applied the VMT emissions factor for personal vehicles to determine the GHG reductions associated with this existing accomplishment.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

Chow, A. 2023. City of San Mateo. Personal communication to E. Krispi, PlaceWorks. April 14

U.S. Census Bureau. 2023. 2014 – 2019 American Community Survey 5-Year Estimates, B08006: Sex of Workers by Means of Transportation to Work [data table].

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Caltrain electrification

### Activity and GHG Reduction

	2030	2040	2045
Electricity use increase (kWh)	11,852,700	11,852,700	11,852,700
Emissions reduction (MTCO <sub>2</sub> e)	3,560	4,200	4,560

### GHG Method

The project team reviewed information from the Caltrain electrification project EIR to estimate decreases in diesel use and increases in electricity use from electrification. The team combined these data with information from the inventory to scale these changes in activity data specifically to San Mateo. The team applied the Caltrain emissions factors from the inventory to determine net GHG reductions from electrification.

### GHG Sources

Peninsula Corridor Joint Powers Board. 2014. *Peninsula Corridor Electrification Project Draft Environmental Impact Report*.

[http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization/PeninsulaCorridorElectrificationProject/PCEP\\_DEIR\\_2014.html](http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization/PeninsulaCorridorElectrificationProject/PCEP_DEIR_2014.html).



# APPENDIX 1

## TECHNICAL DATA FOR QUANTIFIED MEASURES

Data sources, methods, and assumptions for the quantification of CAP measures are provided below.

### BE 1 All-electric new construction

#### Assumptions

	2030	2040	2045
Cumulative % of residential construction influenced by energy efficiency reach code:	90%	95%	95%
Cumulative % of office commercial construction influenced by energy efficiency reach code:	85%	90%	95%
Cumulative % of non-office commercial construction influenced by energy efficiency reach code:	40%	60%	90%
Cumulative % new non-residential buildings that are office space:	59%	64%	64%

#### Activity and GHG reductions

	2030	2040	2045
Electricity savings (kWh)	-8,588,290	-15,674,440	-19,303,790
Natural gas savings (therms)	3,099,740	5,653,260	6,936,870
Emissions reduction (MTCO <sub>2</sub> e)	21,070	38,450	47,250

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Performance indicators

	2030	2040	2045
Number of all-electric new construction residential housing units	8,280 new construction residential housing units built all-electric.	19,360 new construction residential housing units built all-electric.	25,500 new construction residential housing units built all-electric.
Square feet of all-electric new construction non-residential buildings	837,280 square feet of new construction non-residential buildings built all-electric.	2,264,130 square feet of new construction non-residential buildings built all-electric.	3,424,010 square feet of new construction non-residential buildings built all-electric.

## GHG Method

The project team obtained data from Strive San Mateo General Plan 2040 Land Use Element on projected buildout of nonresidential buildings in San Mateo and data from Association of Bay Area Governments (ABAG) Plan Bay Area on projected buildout of households in San Mateo out to 2045, and used these data to estimate the number of new buildings that would be impacted by an all-electric new construction reach code. The team identified the average amount of natural gas used per household are per nonresidential square foot and data on the equivalent amount of electricity that would be required in an all-electric version of similar buildings and applied this information to the projected number of new buildings built in order to estimate the projected reduction in natural gas consumption and the projected increase in electricity consumption resulting from the policy. The team then applied the emission factor for avoided natural gas consumption to estimate the emissions reduction associated with reduced natural gas consumption, and the emission factor for electricity use to estimate the emissions increase associated with increased electricity consumption. The net resulting emissions is the estimated emissions avoided from the policy.

## GHG Sources

California Energy Commission. 2006. "California Commercial End-Use Survey." [https://ww2.energy.ca.gov/ceus/2006\\_enduse.html](https://ww2.energy.ca.gov/ceus/2006_enduse.html)

California Energy Commission. 2009. "2009 California Residential Appliance Saturation Study." [https://ww2.energy.ca.gov/appliances/rass/previous\\_rass.html](https://ww2.energy.ca.gov/appliances/rass/previous_rass.html)

# APPENDIX 1

## BE 2 All-electric existing buildings

### Assumptions

	2030	2040	2045
Cumulative percent of commercial buildings that are office space	59%	64%	64%
Cumulative percent of residential gas equipment reaching end of life replaced with electric due to panel incentive	35%	40%	50%
Cumulative percent of residential electrical panel upgrades resulting in EV purchase	50%	35%	20%
Cumulative percent of office gas equipment reaching end of life replaced with electric due to panel incentive	70%	75%	90%
Cumulative percent of office electrical panel upgrades resulting in EV charging installation	40%	30%	20%
Cumulative percent of EV purchases replacing gasoline vehicle	98%	97%	96%
Cumulative percent of EV purchases replacing diesel vehicle	3%	3%	4%

### Activity and GHG reductions

	2030	2040	2045
Electricity savings (kWh)	-80,105,780	-125,747,100	-133,624,540
Natural gas savings (therms)	5,002,490	11,459,340	17,775,000
Emissions reduction (MTCO <sub>2</sub> e)	102,210	184,610	221,260

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Performance indicators

	2030	2040	2045
Existing residential gas to electric HVAC conversions	9,890 existing residential gas HVAC systems replaced with electric HVAC systems.	22,620 existing residential gas HVAC systems replaced with electric HVAC systems.	35,340 existing residential gas HVAC systems replaced with electric HVAC systems.
Existing residential gas to electric water heating conversions	14,840 existing residential gas water heaters replaced with electric HVAC systems.	33,920 existing residential gas water heaters replaced with electric HVAC systems.	53,000 existing residential gas water heaters replaced with electric HVAC systems.
Existing residential gas to electric clothes drying conversions	7,420 existing residential gas clothes dryers replaced with electric clothes dryers.	16,960 existing residential gas clothes dryers replaced with electric clothes dryers.	26,500 existing residential gas clothes dryers replaced with electric clothes dryers.
Existing residential gas to electric cooking conversions	5,940 existing residential gas ranges and ovens replaced with electric ranges and ovens.	13,570 existing residential gas ranges and ovens replaced with electric ranges and ovens.	21,200 existing residential gas ranges and ovens replaced with electric ranges and ovens.
Existing residential electrical panel upgrades	19,050 existing residential electrical panels upgraded.	43,530 existing residential electrical panels upgraded.	68,020 existing residential electrical panels upgraded.
Square feet of existing offices receiving gas to electric HVAC conversions	5,523,120 square feet of existing office buildings replace existing gas HVAC systems with electric HVAC systems.	12,778,100 square feet of existing office buildings replace existing gas HVAC systems with electric HVAC systems.	19,167,150 square feet of existing office buildings replace existing gas HVAC systems with electric HVAC systems.
Square feet of existing offices receiving gas to electric water heating conversions	8,284,680 square feet of existing office buildings replace existing gas water heaters with electric water heaters.	19,167,150 square feet of existing office buildings replace existing gas water heaters with electric water heaters.	28,750,730 square feet of existing office buildings replace existing gas water heaters with electric water heaters.



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	2030	2040	2045
Square feet of existing offices receiving gas to electric cooking conversions	6,627,740 square feet of existing office buildings replace existing gas ranges and ovens with electric ranges and ovens.	15,333,720 square feet of existing office buildings replace existing gas ranges and ovens with electric ranges and ovens.	23,000,580 square feet of existing office buildings replace existing gas ranges and ovens with electric ranges and ovens.
Square feet of existing offices receiving electrical panel upgrades	10,217,770 square feet of existing office buildings electrical panels upgraded.	23,639,490 square feet of existing office buildings electrical panels upgraded.	35,459,230 square feet of existing office buildings electrical panels upgraded.
Number of electric vehicles purchased/leased to replace internal combustion engine (ICE) vehicles	16,750 electric vehicles purchased or leased by residents or commuters to replace internal combustion engine vehicles.	27,780 electric vehicles purchased or leased by residents or commuters to replace internal combustion engine vehicles.	26,150 electric vehicles purchased or leased by residents or commuters to replace internal combustion engine vehicles.
Existing office parking spaces with EV charging:	8,170 EV charging ports installed at existing office buildings.	14,180 EV charging ports installed at existing office buildings.	14,180 EV charging ports installed at existing office buildings.
Existing residential parking spaces with EV charging:	9,520 EV charging ports installed at existing residential buildings.	15,240 EV charging ports installed at existing residential buildings.	13,600 EV charging ports installed at existing residential buildings.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## GHG Method

The project team used data from Strive San Mateo General Plan 2040 Land Use Element on projected buildout of residential and nonresidential buildings in San Mateo and data from Association of Bay Area Governments (ABAG) Plan Bay Area on projected buildout of households in San Mateo out to 2045 to estimate the number of existing buildings that would be impacted by a policy aimed at providing incentives to encourage residents and businesses to upgrade electric panels and adopt all-electric technologies. The team identified the percent of natural gas equipment (e.g., water heaters) that would be replaced at end of life if this policy existed, using the average life of natural gas equipment to estimate the number of each type of equipment type that would be replaced per year. Next, the project team consulted reports on the average amount of natural gas consumed by each type of equipment to estimate the natural gas consumption avoided through electrification of natural gas equipment. The team used data on energy factors by equipment type to estimate the resulting increase in electricity use resulting from the replacement of natural gas equipment with electric equipment. The team also identified performance indicators for the percent of EV chargers that would be installed as a result of this policy and the resulting number of EVs that would be purchased due to accessibility of charging. The team used data on the average VMT by a passenger vehicle, average efficiency of gasoline vehicles, average efficiency of diesel vehicles, and average efficiency of electric vehicles to estimate the resulting gasoline and diesel consumption avoided and increase in electricity use resulting from the replacement of gasoline and diesel vehicles with electric vehicles. Last, the team applied the appropriate emission factors for natural gas consumption, electricity use, gasoline consumption, and diesel consumption to estimate the emissions reduction associated with a reduction in natural gas consumption, gasoline consumption, and diesel consumption and the increase in emissions associated with an increase in electricity consumption. The net resulting emissions is the estimated emissions avoided from the policy.

## GHG Sources

California Energy Commission. 2006. "California Commercial End-Use Survey." [https://ww2.energy.ca.gov/ceus/2006\\_enduse.html](https://ww2.energy.ca.gov/ceus/2006_enduse.html)

California Energy Commission. 2009. "2009 California Residential Appliance Saturation Study." [https://ww2.energy.ca.gov/appliances/rass/previous\\_rass.html](https://ww2.energy.ca.gov/appliances/rass/previous_rass.html)

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ASHRAE, 2017. "ASHRAE Technical FAQ". <https://www.ashrae.org/technical-resources/technical-faqs>.

US Department of Energy. 2019. [www.fueleconomy.gov](http://www.fueleconomy.gov). <https://www.fueleconomy.gov/>.

# APPENDIX 1

California Air Resources Board. 2022. "EMFAC2021 Web Database". <https://arb.ca.gov/emfac/>.

National Renewable Energy Laboratory. 2018. "CEC EV Infrastructure Projection Tool (EVI-Pro)." <https://afdc.energy.gov/evi-pro-lite>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## RE I Peninsula Clean Energy

### GHG Assumptions

	2030	2040	2045
Percent of residents enrolling in PCE	98%	99%	99.5%
Percent of businesses enrolling in PCE	98%	99%	99.5%
Percent of direct access customers switching to PCE	2%	4%	5%

### GHG Reductions

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	160	170	0

### Performance Indicators

	2030	2040	2045
PCE opt-out rate	1.0%	1.0%	0.5%
kWh supplied by ECO 100	32,959,210	43,792,410	55,425,750

### GHG Method

The project team identified the amount of electricity from San Mateo customers projected to switch from PG&E to PCE service, and PCE customers upgrading to ECO100. The team next applied the difference in PG&E and PCE emissions factors for both regular and ECO100 service to identify the decrease in GHG emissions.

### GHG Sources

California Energy Commission. 2018. *2017 Power Content Label: Peninsula Clean Energy*.  
[https://ww2.energy.ca.gov/pcl/labels/2017\\_labels/PCE\\_2017\\_PCL.pdf](https://ww2.energy.ca.gov/pcl/labels/2017_labels/PCE_2017_PCL.pdf).

City of San Mateo. 2020. *2020 Climate Action Plan Annual Progress Report*.  
<https://www.cityofsanmateo.org/3962/CAP-Progress-Updates>.



# APPENDIX 1

## RE 2 Renewable energy systems for new and existing residences

### GHG Assumptions

	2030	2040	2045
Percent of existing homes installing solar energy systems	15%	25%	30%
Percent of existing homes with solar energy systems installing battery storage systems	20%	35%	50%
Percent of new homes installing battery storage systems	25%	40%	60%

### GHG Reduction

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	70	160	0

### Performance Indicators

	2030	2040	2045
Number of homes built before 2018 with solar panels	4,960	8,540	10,530
Number of total homes (existing and new) with battery energy systems	1,500	12,040	22,710

### GHG Method

For solar energy systems, the project team identified the number of existing homes in San Mateo that could be projected to have a solar energy system. Using data from the National Renewable Energy Laboratory, the team identified how much electricity these solar energy systems could generate annually and applied the community-wide electricity factor to identify electricity savings. For battery systems, the team identified the number of new and existing homes installing solar energy systems and determined the number of these homes that could install a battery energy system. Assuming that battery systems fully charge and discharge once a day, the team identified how much additional renewable energy storage capacity would be enabled by the batteries. The project team then again applied the community-wide electricity factor to identify electricity savings.

### GHG Sources

National Renewable Energy Laboratory. n.d. "PVWatts Calculator." <https://pvwatts.nrel.gov/>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

Regional Climate Action Planning Suite. 2019. RICAPS Menu of Measures version 4.1 [data table].

## RE 3 Renewable energy systems for new and existing nonresidential buildings

### GHG Assumptions

	2030	2040	2045
Percent of existing businesses installing solar energy systems	6%	10%	15%
Percent of existing businesses with solar energy systems installing battery storage systems	15%	25%	40%

### GHG reductions

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	60	90	0

### Performance indicators

	2030	2040	2045
Number of businesses built before 2018 with solar panels	180	340	550
Number of existing businesses with battery energy systems	40	100	240

### GHG Method

The project team identified the number of existing businesses in San Mateo that could be projected to have a solar energy system. Using data from the National Renewable Energy Laboratory, the team identified how much electricity these solar energy systems could generate annually and applied the community-wide electricity factor to identify electricity savings. Next, the team identified the number of existing businesses installing solar energy systems and determined the number of these businesses that could install a battery energy system. Assuming that battery systems fully charge and discharge once a day, the team identified how much additional renewable energy storage capacity would be enabled by the batteries. The project team then again applied the community-wide electricity factor to identify electricity savings.

# APPENDIX 1

## GHG Sources

National Renewable Energy Laboratory. n.d. "PVWatts Calculator." <https://pvwatts.nrel.gov/>.

Regional Climate Action Planning Suite. 2019. RICAPS Menu of Measures version 4.1 [data table].

## EE 1 Residential energy efficiency retrofits

### Assumptions

	2030	2040	2045
Percent of existing homes conducting standard retrofits (not including fuel-switched homes)	15%	18%	20%
Percent of existing homes retrofitting to current Title 24 standards (not including fuel-switched homes)	20%	25%	30%

### Activity and GHG reductions

	2030	2040	2045
Electricity savings (kWh)	9,137,050	7,303,020	6,039,130
Natural gas savings (therms)	903,660	1,030,250	996,860
Emissions reduction (MTCO <sub>2</sub> e)	6,160	7,020	6,790

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Performance indicators

	2030	2040	2045
Number of homes retrofitted	2,290 single-family homes and 1,840 multifamily homes undergoing standard retrofits, and 3,060 single-family homes and 2,450 multifamily homes being upgraded to current Title 24 standards	2,540 single-family homes and 2,040 multifamily homes undergoing standard retrofits, and 3,530 single-family homes and 2,830 multifamily homes being upgraded to current Title 24 standards	2,350 single-family homes and 1,890 multifamily homes undergoing standard retrofits, and 3,530 single-family homes and 2,830 multifamily homes being upgraded to current Title 24 standards

## GHG Method

The project team looked at reports from retrofit programs throughout California to identify the typical electricity and natural gas savings from single-family and multi-family home retrofits and applied these savings to the energy use patterns of residences in San Mateo. The team next reviewed current and projected future Title 24 standards against the current energy performance of San Mateo homes and projections of future San Mateo Title 24 retrofits to determine the typical electricity and natural gas savings. The team then applied the appropriate emissions factors to the energy savings estimates to determine GHG reductions.

## GHG Sources

California Energy Commission. 2014. Impact Evaluation of the California Comprehensive Residential Retrofit Programs.

## EE 2 Nonresidential energy efficiency retrofits

### Assumptions

	2030	2040	2045
Percent of existing businesses conducting standard retrofits (not including fuel-switched businesses)	25%	35%	10%
Percent of existing businesses retrofitting to current Title 24 standards (not including fuel-switched businesses)	15%	40%	75%



# APPENDIX 1

## Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	22,252,780	60,968,630	93,592,880
Natural gas savings (therms)	535,400	1,266,570	1,964,000
Emissions reduction (MTCO <sub>2</sub> e)	3,800	8,860	13,380

## Performance Indicators

	2030	2040	2045
Number of businesses retrofitted	590 businesses undergoing standard retrofits, and 360 businesses upgraded to current Title 24 standards.	740 businesses undergoing standard retrofits, and 840 businesses upgraded to current Title 24 standards.	170 businesses undergoing standard retrofits, and 1,300 businesses upgraded to current Title 24 standards.

## GHG Method

The project team looked at reports of the energy savings from different types of nonresidential energy efficiency retrofits to identify the typical electricity and natural gas savings from these activities and applied these savings to the energy use patterns of San Mateo businesses. The team next reviewed current and projected future Title 24 standards against the current energy performance of San Mateo businesses and projections of future San Mateo Title 24 retrofits to determine the typical electricity and natural gas savings. The team then applied the appropriate emissions factors to the energy savings estimates to determine GHG reductions.

## GHG Sources

Pacific Northwest National Laboratory. 2011. Advanced Energy Retrofit Guides: Office Buildings. [https://www.pnnl.gov/main/publications/external/technical\\_reports/PNNL-20761.pdf](https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-20761.pdf).

Pacific Northwest National Laboratory. 2011. Advanced Energy Retrofit Guides: Retail Buildings. [https://www.pnnl.gov/main/publications/external/technical\\_reports/PNNL-20814.pdf](https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-20814.pdf).

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## EE 3 Residential tree planting

### Assumptions

	2030	2040	2045
Percent of households with shade trees	10%	25%	35%

### Activity and GHG reduction

	2030	2040	2045
Electricity savings (kWh)	793,560	1,889,740	2,837,540
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	Less than 10	0

### Performance Indicators

	2030	2040	2045
Number of households with shade trees	4,240	13,130	22,330

### GHG Method

The GHG inventory and reports from PG&E were used to identify per business energy use in San Mateo, while data from the Pacific Northwest National Laboratory, the California Energy Commission, and academic studies were used to determine reductions per home. These results were combined with participation rates to calculate total reductions in energy use from this measure. The outcome was then combined with emissions factors from the inventory to determine GHG reductions.

### GHG Sources

The project team reviewed studies about the typical electricity savings from reduced air conditioning demand associated with tree planting. The team then applied this information to projections of future participation and the energy use patterns in San Mateo to identify total electricity reduction. Next, the team converted this to GHG emission savings using the appropriate emissions factors.

# APPENDIX 1

## ME 1 Energy efficiency for new municipal buildings

### GHG Assumptions, Reductions, and Performance Indicators

This measure is supportive due to the lack of information about future municipal construction. There are no assumptions, activity or GHG reductions, or performance indicators for supportive measures.

### GHG Method

Supportive measures do not produce direct, measurable GHG reductions, so no calculations were made.

### GHG Sources

Supportive measures do not produce direct, measurable GHG reductions. There are no sources for GHG reduction calculations for supportive measures.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## ME 2 Energy efficiency at existing municipal buildings

### Assumptions

	2030	2040	2045
Percent of existing municipal square footage retrofitted	10%	25%	35%

*Note that these retrofits go beyond those included as part of the Sustainable Solutions Turnkey program, as those are already accounted for as a planned action.*

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	67,260	168,140	235,400
Natural gas savings (therms)	1,860	4,640	6,500
Emissions reduction (MTCO <sub>2</sub> e)	10	30	40

### Performance Indicators

	2030	2040	2045
Square footage of retrofitted municipal buildings	9,440	23,610	33,050

### GHG Method

The project team looked at the typical energy efficiency savings that can be achieved with retrofits to office buildings and applied this reduction to the projected amount of retrofitted City square footage to calculate the total electricity and natural gas savings. The team then used the appropriate emission factors to identify the GHG reductions from these retrofits.

### GHG Sources

City of San Mateo. 2007. *City of San Mateo Greenhouse Gas Emissions Inventory Report*. <https://www.cityofsanmateo.org/DocumentCenter/View/5262/APPENDIX-S-October24-2007?bidId=>

Pacific Northwest National Laboratory. 2011. *Advanced Energy Retrofit Guides: Office Buildings*. [https://www.pnnl.gov/main/publications/external/technical\\_reports/PNNL-20761.pdf](https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-20761.pdf).



# APPENDIX 1

## ME 3 All-electric municipal buildings

### Assumptions

	2030	2040	2045
Cumulative building area of existing municipal building/s electrified (square feet):	40,000	60,000	80,000
Cumulative number of police stations & fire stations electrified:	0	0	1
Cumulative building area of new municipal building/s electrified (square feet):	40,000	60,000	80,000

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	-157,380	-236,070	-314,760
Natural gas savings (therms)	19,760	29,640	39,520
Emissions reduction (MTCO <sub>2</sub> e)	130	200	270

### Performance Indicators

	2030	2040	2045
Square feet of existing municipal building/s electrified:	40,000 square feet of existing municipal buildings retrofitted to all-electric.	60,000 square feet of existing municipal buildings retrofitted to all-electric.	80,000 square feet of existing municipal buildings retrofitted to all-electric.
Number of police stations & fire stations electrified:	0 existing police stations or fire stations retrofitted to all-electric.	0 existing police stations or fire stations retrofitted to all-electric.	1 existing police stations or fire stations retrofitted to all-electric.
Square feet of new municipal building/s electrified:	40,000 square feet of new municipal buildings built all-electric.	60,000 square feet of new municipal buildings built all-electric.	80,000 square feet of new municipal buildings built all-electric.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## GHG Method

The project team took inputs from City staff to project the total square footage of new municipal construction that is built all-electric and existing municipal construction that is retrofitted to be all-electric. The team estimated annual gas use associated with the existing municipal buildings to be retrofitted and the newly constructed municipal buildings (assuming they were built with natural gas equipment), based on energy use intensity information from the California Energy Commission Commercial End-Use Survey. The team used this estimate on "business as usual" natural gas consumption for these buildings to calculate the natural gas consumption avoided from retrofitting to all-electric or building to all-electric. The team looked at data on the average amount of natural gas consumed by each type of equipment to estimate the natural gas consumption avoided through electrification of natural gas equipment and used data on energy factors by equipment type was used to estimate the resulting increase in electricity use resulting from the replacement of natural gas equipment with electric equipment. The team applied emission factors for natural gas consumption and electricity use to estimate the emissions reduction associated with a reduction in natural gas consumption and the increase in emissions associated with an increase in electricity use and took the net resulting emissions as the estimated emissions avoided from the policy.

## GHG Sources

California Energy Commission. 2009. "2009 California Residential Appliance Saturation Study." [https://ww2.energy.ca.gov/appliances/rass/previous\\_rass.html](https://ww2.energy.ca.gov/appliances/rass/previous_rass.html)

# APPENDIX 1

## CF 1 Electric vehicle charging infrastructure

### Assumptions

	2030	2040	2045
Cumulative average square feet of new commercial building space per parking spot	300	300	300
Target percent of new workplace parking to have EV charger installed	20%	20%	25%
Target percent of new multi-unit dwelling residents with EV charger access	15%	25%	30%
Target percent of new single-family homes to have EV charger outlet installed	15%	25%	35%
Cumulative percent commercial buildings that are office space with parking	59%	64%	64%
Cumulative average square feet of existing commercial building space per parking spot	600	600	600
Target percent of existing workplace parking to have EV charger installed	7%	8%	10%
Target percent of existing multi-unit dwelling residents with access to EV charging	7%	8%	10%
Cumulative target additional public parking spaces with EV charging	38	55	60
Cumulative percent of EV purchases that replace a gasoline vehicle	98%	97%	96%
Cumulative percent of EV purchases that replace a diesel vehicle	2%	3%	4%
Target percent of heavy-duty vehicle converted to EV	5%	20%	25%

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	-22,561,870	-36,502,430	-51,974,960
Emissions reduction (MTCO <sub>2e</sub> )	24,420	49,390	69,780

## Performance Indicators

	2030	2040	2045
New non-residential parking spaces with EV charging	1,570 EV charging ports installed at new non-residential buildings.	3,160 EV charging ports installed at new non-residential buildings.	5,010 EV charging ports installed at new non-residential buildings.
New multi-unit dwelling residential parking spaces with EV charging	810 EV charging ports installed at new multi-family residential buildings.	3,380 EV charging ports installed at new multi-family residential buildings.	5,290 EV charging ports installed at new multi-family residential buildings.
New single-family residential parking spaces with EV charger outlet	680 EV charging outlets installed at new single-family residential buildings.	1,970 EV charging outlets installed at new single-family residential buildings.	3,600 EV charging outlets installed at new single-family residential buildings.
Existing non-residential parking spaces with EV charging	1,540 EV charging ports installed at existing non-residential buildings.	2,100 EV charging ports installed at existing non-residential buildings.	2,770 EV charging ports installed at existing non-residential buildings.
Existing multi-unit dwelling residential parking spaces with EV charging	1,850 EV charging ports installed at existing multi-family residential buildings.	2,570 EV charging ports installed at existing multi-family residential buildings.	3,530 EV charging ports installed at existing multi-family residential buildings.
Existing additional public parking spaces with EV charging	38 EV charging ports installed at existing public locations.	60 EV charging ports installed at existing public locations.	60 EV charging ports installed at existing public locations.



# APPENDIX 1

	2030	2040	2045
Number of light-duty electric vehicles purchased or leased	5510 light-duty electric vehicles purchased or leased	10,840 light-duty electric vehicles purchased or leased.	16,110 light-duty electric vehicles purchased or leased

## GHG Method

The project team relied on data from the Strive San Mateo General Plan 2040 Land Use Element for the projected buildout of nonresidential buildings in San Mateo, along with data from Association of Bay Area Governments (ABAG) Plan Bay Area on projected buildout of households in San Mateo out to 2050, to estimate the number of new buildings that would be impacted by an electric vehicle charging infrastructure new construction reach code. The team used permit data from the U.S. Department of Housing and Urban Development to estimate the percent of new residential units that will be single family or duplex vs. 3+ unit multifamily. Using assumptions regarding the building square footage per new development parking space, the team identified the total number of parking spaces associated with multi-family residential and commercial development, assuming an increasing percentage of new development parking spaces will be required to be built electric vehicle (EV) capable to accommodate electric vehicle supply equipment (EVSE). The team looked at how the deployment of EVSE in new development is projected to increase the rate at which residents and employees will replace gasoline vehicles with EVs, and estimated how the increased adoption of EVs is likely to decrease the VMT (and associated gasoline and diesel consumption) from gasoline and diesel vehicles and increase the VMT (and associated electricity use) from EVs. The team then applied emission factors for avoided gasoline and diesel consumption, and increased electricity use, and took the difference as the net reduction in GHG emissions.

## GHG Sources

California Air Resources Board. 2022. "EMFAC2021 Web Database."

NREL, 2018. "CEC EV Infrastructure Projection Tool (EVI-Pro)."

U.S. Census Bureau. 2017. "American Community Survey."

U.S. Department of Energy. 2019. "www.fueleconomy.gov."

U.S. Department of Housing and Urban Development. 2019. "State of the Cities Data Systems."

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

U.S. Department of Transportation Federal Highway Administration. 2016. "Average miles driven per year by state."

# APPENDIX 1

## CF 2 Electric vehicle education and outreach

### Assumptions

	2030	2040	2045
Target percent of total community Transportation Network Company (TNC) VMT from electric vehicles	30%	45%	60%
Target percent total community VMT from electric vehicles	30%	60%	70%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	-4,334,040	-6,786,810	-10,211,980
Emissions reduction (MTCO <sub>2</sub> e)	4,910	8,030	12,360

### Performance Indicators

	2030	2040	2045
Annual additional VMT travelled by EV TNCs	17,528,180 vehicle miles travelled by internal combustion engine transportation network companies vehicles replaced with electric vehicles.	30,375,160 vehicle miles travelled by internal combustion engine transportation network companies vehicles replaced with electric vehicles.	45,704,900 vehicle miles travelled by internal combustion engine transportation network companies vehicles replaced with electric vehicles.

### GHG Method

The projected team relied on forecasted total community VMT from passenger vehicles and estimates from the City of San Francisco on the percent of total community VMT from Transportation Network Companies (TNCs) to estimate the total annual VMT from TNCs in City of San Mateo. The team assumed that the policy or program aimed at regulating or incentivizing TNCs to increase adoption of EVs will results in a specific percent of TNCs being EVs by a given target year, and then estimated how the increased adoption of TNC EVs will decrease the VMT (and associated gasoline consumption) associated with gasoline vehicles and increase the VMT (and

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

associated electricity consumption) associated with EVs. The team applied the emission factor for avoided gasoline consumption, and an emissions factor for increased electricity use. The difference between the two results is the net GHG reduction from this measure.

## GHG Sources

California Air Resources Board, 2022. "EMFAC2021 Web Database."

San Francisco County Transportation Authority. 2017. "TNCs Today: A Profile of San Francisco Transportation Network Company Activity."

US Department of Energy. 2019. [www.fueleconomy.gov](http://www.fueleconomy.gov).

## CF 3 Clean City fleet

### GHG Assumptions

	2030	2040	2045
Percent of City vehicles replaced with EVs	25%	45%	60%
Percent of City vehicles fueled by biomethane	15%	20%	25%

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	-105,540	-212,500	-319,750
Emissions reduction (MTCO <sub>2</sub> e)	130	200	270

### Performance Indicators

	2030	2040	2045
Fleet EV VMT	610,020	1,250,360	1,779,020
Fleet biomethane VMT	366,010	555,720	741,260



# APPENDIX 1

## GHG Method

The projected team looked at State projections for regional increases in electric and natural gas (including biomethane) vehicles and applied these proportions to the City municipal fleet. The team then took the local projections for increases in electric and natural gas vehicles in the municipal fleet and identified the increase in electric and natural gas VMT resulting from local policies. The team then adjusted the natural gas VMT to account for the different energy density of natural gas and gasoline/diesel and calculated the increase in electricity resulting from greater municipal EV adoption. Lastly, the team applied emission factors, taking the net difference between decreased VMT emissions from electric and natural gas vehicle adoption and increased electricity use as the overall GHG benefit.

## GHG Sources

City of San Mateo. 2007. *City of San Mateo Greenhouse Gas Emissions Inventory Report*. <https://www.cityofsanmateo.org/DocumentCenter/View/5262/APPENDIX-S-October24-2007?bidId=>

ICLEI Local Governments for Sustainability USA. 2012. *US Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions*. <http://www.icleiusa.org/tools/ghgprotocol/community-protocol>.

Gable, C., and Gable, S. 2019. "Gasoline Gallon Equivalents (GGE)." <https://www.thoughtco.com/fuel-energy-comparisons-85636>.

## CF 4 Clean fuel

## GHG Assumptions

	2030	2040	2045
Target % total community VMT from hydrogen vehicles	8%	30%	45%

## Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	-2,186,300	-8,413,180	-13,430,770
Emissions reduction (MTCO <sub>2</sub> e)	4,210	16,920	26,360

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Performance Indicators

	2030	2040	2045
Number of heavy-duty hydrogen vehicles purchased or leased	260 hydrogen fuel heavy-duty cell vehicles purchased or leased .	1,110 hydrogen fuel cell heavy-duty vehicles purchased or leased .	1,770 hydrogen fuel cell heavy-duty vehicles purchased or leased .

## GHG Method

The project team estimated how the deployment of hydrogen fueling stations will increase the rate at which residents and employees will replace heavy-duty gasoline and diesel vehicles with hydrogen fuel cell vehicles (FCVs). The team analyzed how the increased adoption of FCVs is likely to decrease the VMT (and associated gasoline consumption) associated with heavy-duty gasoline diesel vehicles and increase the VMT (and associated hydrogen consumption) associated with FCVs. The team used data from the U.S. Department of Energy on the efficiency of the electrolysis process to estimate the amount of electricity required to produce hydrogen. The team then applied an emission factor for avoided gasoline and diesel consumption to estimate the emissions reduction associated with reduced gasoline and diesel consumption, and an emission factor for electricity consumption to estimate the emissions increase associated with increased electricity use. The net resulting emissions is the estimated emissions avoided from the policy.

## GHG Sources

California Air Resources Board, 2022. "EMFAC2021 Web Database."

California Air Resources Board, 2023. "Final 2022 Scoping Plan – AB 32 GHG Inventory Sectors Modeling Data Spreadsheet." <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>.

US Department of Energy, 2019. [www.fueleconomy.gov](http://www.fueleconomy.gov).

U.S. Department of Energy, 2019. "DOE Technical Targets for Hydrogen Production from Electrolysis."

# APPENDIX 1

## ST 1 Bicycle mode share

### GHG Assumptions

	2030	2040	2045
Additional miles of bike lanes	22	45.2	45.2

### Activity and GHG Reduction

	2030	2040	2045
Travel savings (VMT)	300,960	704,120	751,370
Emissions reduction (MTCO <sub>2</sub> e)	80	170	180

### Performance Indicators

	2030	2040	2045
Total miles of bike lanes	78	101	101

### GHG Method

The project team identified projected increase in bike lanes from implementation of the Bicycle Master Plan. Based on the proposed additional miles of bike lanes in San Mateo, the team followed the recommendations of the California Air Pollution Control Officer's Association to estimate the projected decrease in VMT as a result. The team then applied the appropriate emissions factors to calculate the GHG reduction.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

City of San Mateo. 2019. *City of San Mateo Bicycle Master Plan*. <https://www.cityofsanmateo.org/3944/Bicycle-Master-Plan-Update>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## ST 2 Pedestrian mode share

### GHG Assumptions

It is assumed that all new development occurs in infill areas (areas with existing development)

### Activity and GHG Reduction

	2030	2040	2045
Travel savings (VMT)	436,590	497,160	530,520
Emissions reduction (MTCO <sub>2</sub> e)	110	120	130

### Performance Indicators

There are no performance indicators associated with this measure.

### GHG Method

Using the Pedestrian Master Plan, the project team identified the existing and planned miles of sidewalks and pedestrian pathways in San Mateo. The team applied a method recommended by the California Air Pollution Control Officers Association to determine the VMT reduction, and then applied the appropriate emissions factor to calculate GHG reductions.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

City of San Mateo. 2012. "Citywide Pedestrian Master Plan." <https://www.cityofsanmateo.org/2218/Pedestrian-Master-Plan>



# APPENDIX 1

## ST 3 Micromobility and shared mobility

### GHG assumptions, activity and GHG reductions, and performance indicators.

This is a supportive measure, due to the lack of sufficient data or a feasible method of quantification that would avoid double-counting reductions with other measures. As a result, there are no assumptions, activity or GHG reductions, and performance indicators associated with this measure.

#### GHG Method

Supportive measures do not produce direct, measurable GHG reductions, so no calculations were made.

#### GHG Sources

Supportive measures do not produce direct, measurable GHG reductions. There are no sources for GHG reduction calculations for supportive measures.

## ST 4 Public transit service

### GHG Assumptions

	2030	2040	2045
Bus coverage	15%	20%	20%
Percent increase in Caltrain service	25%	40%	50%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	-10,253,31	-23,468,340	-31,189,470
Travel savings (VMT)	13,770,100	23,451,790	29,098,510
Emissions reduction (MTCO <sub>2</sub> e)	3,610	5,660	6,910

### Performance Indicators

	2030	2040	2045
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# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

Bus commute share	15%	20%	20%
Average Caltrain daily ridership in San Mateo	8,070	12,900	15,720

## GHG Method

For increases in the bus coverage network, the project team made an assumption regarding the percentage increase in bus network miles. Using methods from the California Air Pollution Control District, the project team determined the VMT reduction that would occur given this increase in network coverage, and then applied the appropriate GHG emissions factor. For an increase in Caltrain service frequency, the project team reviewed Caltrain's existing business plan and projected increases in service under the "Moderate Growth" scenario, then applied this increase to San Mateo. Using factors from the inventory and existing/planned activity calculations, the team determined the VMT reduction from increased Caltrain service as well as the increase in electricity use due to Caltrain becoming a mostly electric system. The team applied the appropriate emissions factors to the difference in VMT to calculate a reduction in emissions.

## GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

Caltrain. 2020. *Caltrain Business Plan Summary Report*.  
<https://www.caltrain.com/media/24042/download?inline>.

Caltrain. 2019. *Caltrain Business Plan: Developing a Long-Range Vision for Caltrain*. [https://caltrain2040.org/wp-content/uploads/CBP\\_CIA\\_R2\\_Booklet\\_SanMateo-2.pdf](https://caltrain2040.org/wp-content/uploads/CBP_CIA_R2_Booklet_SanMateo-2.pdf).

U.S. Census Bureau. 2023. 2014 – 2019 American Community Survey 5-Year Estimates, B08006: Sex of Workers by Means of Transportation to Work [data table].

# APPENDIX 1

## ST 5 Commuter programs

### GHG Assumptions

	2030	2040	2045
Percent of existing employers (pre-2006) participating in TDM	5%	20%	30%
Average trip reduction from voluntary TDM participation, beyond other CAP measures	8%	30%	40%

### Activity and GHG Reduction

	2030	2040	2045
Travel savings (VMT)	15,290	278,640	669,000
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	70	160

### Performance Indicators

	2030	2040	2045
Existing (pre-2006) businesses participating in TDM efforts	130	540	810

### GHG Method

The project team identified the amount of commute-related VMT from personal vehicles associated with existing businesses and applied the projected metrics from voluntary participation in Transportation Demand Management (TDM) programs to determine the total VMT reduction from implementation of this measure. The team then used the appropriate emissions factors to calculate GHG reductions. It is assumed that these TDM standards would go beyond trip reductions associated with other measures in the CAP, as the goal of TDM efforts is to reduce trip generation below the level that would otherwise occur if the TDM requirement was not in place.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## ST 6 Transportation Demand Management

### GHG Assumptions

	2030	2040	2045
Percent of new developments subject to TDM rules	90%	90%	90%
Average trip reduction from new development subject to TDM rules, beyond other CAP measures	10%	15%	20%

### Activity and GHG Reduction

	2030	2040	2045
Travel savings (VMT)	7,646,580	32,944,170	56,484,350
Emissions reduction (MTCO <sub>2</sub> e)	2,010	7,950	13,410

### Performance Indicators

	2030	2040	2045
Service population in new development (2018 and later) subject to the TDM ordinance	29,940	65,680	86,010

### GHG Method

The project team determined the number of new people and jobs in developments that would be subject to TDM rules, excluding those already identified through the existing and planned activities assessment. Using projections of future TDM standards, the project team determined the amount of VMT that would be reduced by future TDM requirements, then converted this reduction to a decrease in GHG emissions. It is assumed that these TDM standards would go beyond trip reductions associated with other measures in the CAP, as the goal of TDM efforts is to reduce trip generation below the level that would otherwise occur if the TDM requirement was not in place.



# APPENDIX 1

## GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

## ST 7 Transit-oriented development

### GHG Assumptions

	2030	2040	2045
Percent of new units in areas supporting transit-oriented development	95%	95%	95%
Percent of new nonresidential square footage in areas supporting transit-oriented development	90%	90%	90%

### Activity and GHG Reduction

	2030	2040	2045
Travel savings (VMT)	38,865,630	78,398,130	99,833,910
Emissions reduction (MTCO <sub>2</sub> e)	10,200	18,920	23,700

### Performance Indicators

	2030	2040	2045
New development in TOD zones	9,610 households and 7,350 employees	20,330 households and 14,880 employees	26,520 households and 18,970 employees

### GHG Method

The project team identified the anticipated development in areas that support transit-oriented development and used geospatial analysis to obtain a reasonable estimate of the new growth potential in these areas. The team then used resources from the California Air Pollution Control Officers Association to determine the VMT reduction associated with transit-oriented development in these areas, then applied the appropriate emissions factors to calculate GHG reductions.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

City of San Mateo. 2018. Area plans [GIS file].

City of San Mateo. 2018. SMRoadCenterline [GIS file].

Metropolitan Transportation Commission. 2017. Major\_Transit\_Stops\_2017 [GIS file].

# APPENDIX 1

## SW 1 Composting program

### GHG Assumptions

	2030	2040	2045
Residential composting participation rate	90%	93%	95%
Nonresidential composting participation rate	85%	88%	90%

### Activity and GHG Reduction

	2030	2040	2045
Waste savings (tons)	2,350	3,900	4,220
Emissions reduction (MTCO <sub>2</sub> e)	1,030	1,710	1,850

### Performance Indicators

	2030	2040	2045
Composting participation levels	47,270 households and 3,890 businesses	59,020 households and 4,510 businesses	66,800 households and 4,880 businesses

### GHG Method

The project team reviewed the number of future projected residences and nonresidential buildings participating in the community's composting program, removing the currently participating customers to only focus on growth in the composting program. The team used results of a statewide waste characterization study to estimate the total amount of organic waste generated by the participants and combined this information with technical factors for waste decomposition by materials to identify the total reduction in GHG emissions.

### GHG Sources

California Air Resources Board. 2010. *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories* version 1.1. [https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo\\_protocol\\_v1\\_1\\_2010-05-03.pdf](https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf)

California Air Resources Board. 2011. *Landfill Emissions Tool* version 1.3. <https://ww3.arb.ca.gov/cc/landfills/landfills.htm>

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California Department of Resources Recycling and Recovery. 2020. *2018 Disposal-Facility-Based Characterization of Solid Waste in California*. <https://www2.calrecycle.ca.gov/Publications/Details/1546>.

City of San Mateo. 2022. *2022 Climate Action Plan Annual Progress Report*. <https://www.cityofsanmateo.org/3962/CAP-Progress-Updates>

## SW 2 Expanded recycling service

### GHG Assumptions

	2030	2040	2045
Target diversion rate	85%	88%	90%

### Activity and GHG Reduction

	2030	2040	2045
Waste savings (tons)	9,860	12,570	14,330
Emissions reduction (MTCO <sub>2</sub> e)	6,070	7,730	8,820

### Performance Indicators

	2030	2040	2045
Total tons of recyclables recovered (curbside bins only)	22,450	27,420	30,480

### GHG Method

The project team looked at projections of how San Mateo's diversion rate from curbside recycling may increase in future years and used statewide waste characterization studies to identify the amounts of various material types that could be recovered from this increase. The team then applied the results of technical studies about waste decomposition to determine the total GHG reductions that would result from increased waste collection.

### GHG Sources

California Air Resources Board. 2010. *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories* version 1.1. [https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo\\_protocol\\_v1\\_1\\_2010-05-03.pdf](https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf)



# APPENDIX 1

California Air Resources Board. 2011. Landfill Emissions Tool version 1.3. <https://ww3.arb.ca.gov/cc/landfills/landfills.htm>

California Department of Resources Recycling and Recovery. 2020. *2018 Disposal-Facility-Based Characterization of Solid Waste in California*. <https://www2.calrecycle.ca.gov/Publications/Details/1666>.

Chow, A. 2023. City of San Mateo. Personal communication to E. Krispi, PlaceWorks. April 24.

## SW 3 Waste awareness and source reduction

### GHG Assumptions

	2030	2040	2045
Decrease in non-organic and non-recyclable waste tonnage	5%	20%	50%

### Activity and GHG Reduction

	2030	2040	2045
Waste savings (tons)	15,420	30,110	41,510
Emissions reduction (MTCO <sub>2</sub> e)	2,080	4,050	5,590

### Performance Indicators

	2030	2040	2045
Decrease in non-organic and non-recyclable waste tonnage sent to landfills	15,420	30,110	41,510

### GHG Method

The project team looked at statewide waste characterization studies to determine the amount of materials being produced in San Mateo that could not be recycled or composted (including construction and demolition wastes) and used technical studies about waste characterization to determine the GHG emissions associated with a ton of this waste material. The project team then examined projections about waste awareness potential to identify how much of this waste could be reduced in future years and combined these two outcomes to determine the total GHG savings.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## GHG Sources

California Air Resources Board. 2010. *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories* version 1.1. [https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo\\_protocol\\_v1\\_1\\_2010-05-03.pdf](https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf)

California Air Resources Board. 2011. *Landfill Emissions Tool* version 1.3. <https://ww3.arb.ca.gov/cc/landfills/landfills.htm>

California Department of Resources Recycling and Recovery. 2020. *2018 Disposal-Facility-Based Characterization of Solid Waste in California*. <https://www2.calrecycle.ca.gov/Publications/Details/1666>.

## WW 1 Water-efficiency retrofits for existing buildings

### GHG Assumptions

	2030	2040	2045
Percent of existing homes retrofitting water fixtures	50%	70%	80%
Percent of existing businesses retrofitting water fixtures	40%	70%	80%
Percent of existing homes with greywater systems	5%	15%	20%
Percent of existing businesses with greywater systems	3%	10%	15%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	411,310	777,100	914,320
Water savings (millions of gallons)	160	280	340
Emissions reduction (MTCO <sub>2</sub> e)	170	300	360

# APPENDIX 1

## Performance Indicators

	2030	2040	2045
Number of water efficiency retrofits	19,890 existing homes and 1,610 existing businesses with water efficiency retrofits.	27,840 existing homes and 2,820 existing businesses with water efficiency retrofits.	31,820 existing homes and 3,230 existing businesses with water efficiency retrofits.
Number of greywater system installations as part of retrofit activities	2,120 homes and 120 businesses with greywater systems installed.	6,360 homes and 400 businesses with greywater systems installed.	8,480 homes and 610 businesses with greywater systems installed.

## GHG Method

Working on the assumption that half of greywater systems are laundry-to-landscaping, and that the other half uses greywater from additional sources such as wash basins and showers, the project team identified the water savings resulting from greywater systems for an individual home or business. The project team then used the water savings to determine the decrease in electricity use and direct process emissions associated with this effort per building, and then applied the projections of greywater installations at existing San Mateo buildings as part of retrofit activities to identify the total water, electricity, and direct process emissions. The team applied the appropriate electricity emissions coefficients to identify the additional GHG savings.

## GHG Sources

Alliance for Water Efficiency. 2009. *Making Every Drop Work: Increasing Water Efficiency in California's Commercial, Industrial, and Institutional (CII) Sector*.

<https://www.allianceforwaterefficiency.org/resources/publications/making-every-drop-work-increasing-water-efficiency-california%E2%80%99s-commercial>.

California Department of Water Resources. 2013. *California Water Plan 2013 Update, Volume 3, Chapter 3: Water Use Efficiency*.

[http://toolbox.calwep.org/wiki/California\\_Water\\_Plan\\_2013\\_Update\\_\(selections\)#tab=Vol\\_3\\_Ch\\_3\\_-\\_Water\\_Use\\_Efficiency](http://toolbox.calwep.org/wiki/California_Water_Plan_2013_Update_(selections)#tab=Vol_3_Ch_3_-_Water_Use_Efficiency).

California Department of Water Resources. 2017. *Making Water Conservation a California Way of Life: Implementing Executive Order B-37-16*. <https://water.ca.gov/-/media/DWR-Website/Web->

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

[Pages/Programs/Water-Use-And-Efficiency/Make-Water-Conservation-A-California-Way-of-Life/County-Drought-Planning/Files/Making-Water-Conservation-a-CA-Way-of-Life-EO-B-37-16.pdf](#).

## WW 2 Water-efficient landscaping

### GHG Assumptions

	2030	2040	2045
Reduction in total outdoor water use	10%	20%	25%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	374,760	827,380	1,086,620
Water savings (millions of gallons)	260	570	750
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	10	0

### GHG Method

The team estimated the total water use that occurs outdoors in San Mateo and determined the amount that would be reduced based on assumed participation levels. The project team then used the water savings to determine the decrease in electricity use associated with this effort and applied the appropriate electricity emissions coefficients to identify the GHG savings.

### GHG Sources

There are no sources for this measure beyond the inventory and forecast.

## WW 3 Water efficiency in new construction

### GHG Assumptions

	2030	2040	2045
Percent of new homes installing greywater systems	8%	20%	25%
Percent of new businesses installing greywater systems	5%	15%	20%



# APPENDIX 1

## Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	7,620	40,580	66,320
Water savings (millions of gallons)	10	30	50
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	10	10

## Performance Indicators

	2030	2040	2045
Number of new homes with greywater systems	810	4,280	6,980
Number of new businesses with greywater systems	30	160	280

## GHG Method

Working on the assumption that half of greywater systems are laundry-to-landscaping, and that the other half uses greywater from additional sources such as wash basins and showers, the project team identified the water savings resulting from greywater systems for an individual home or business. The project team then used the water savings to determine the decrease in electricity use and direct process emissions associated with this effort per building, and then applied the projections of greywater installations at new San Mateo buildings to identify the total water, electricity, and direct process emissions. The team applied the appropriate electricity emissions coefficients to identify the additional GHG savings.

## GHG Sources

Alliance for Water Efficiency. 2009. *Making Every Drop Work: Increasing Water Efficiency in California's Commercial, Industrial, and Institutional (CII) Sector*.  
<https://www.allianceforwaterefficiency.org/resources/publications/making-every-drop-work-increasing-water-efficiency-california%E2%80%99s-commercial>.

California Department of Water Resources. 2013. *California Water Plan 2013 Update, Volume 3, Chapter 3: Water Use Efficiency*.  
[http://toolbox.calwep.org/wiki/California Water Plan 2013 Update \(selections\)#tab=Vol 3 Ch 3 - Water Use Efficiency](http://toolbox.calwep.org/wiki/California%20Water%20Plan%202013%20Update%20(selections)#tab=Vol_3_Ch_3_-_Water_Use_Efficiency).

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

California Department of Water Resources. 2017. *Making Water Conservation a California Way of Life: Implementing Executive Order B-37-16*. <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Make-Water-Conservation-A-California-Way-of-Life/County-Drought-Planning/Files/Making-Water-Conservation-a-CA-Way-of-Life-EO-B-37-16.pdf>.

## OR 1 Alternative fuel off-road equipment

### GHG Assumptions

	2030	2040	2045
Percent of landscaping equipment that uses electricity	20%	45%	60%
Percent of other off-road equipment that uses electricity	15%	25%	30%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	-2,201,600	-4,633,000	-6,091,990
Emissions reduction (MTCO <sub>2</sub> e)	3,660	7,130	9,890

### GHG Method

The team used data from the California Air Resources Board and the inventory to identify the reduction in direct emissions per percent of landscaping equipment and non-landscaping off-road equipment converted to electricity traded in. The team then estimated the decrease in gasoline and diesel fuel resulting from this effort and used information about energy density to determine the increase in electricity needs. The team estimated the GHG increase from greater electricity needs and subtracted this from the emission reduction from decreased fuel use to determine the net GHG reduction.

### GHG Sources

Alternative Fuels Data Center. 2014. *Alternative Fuels Data Center – Fuel Properties Comparison*. [https://afdc.energy.gov/fuels/fuel\\_comparison\\_chart.pdf/](https://afdc.energy.gov/fuels/fuel_comparison_chart.pdf/)

California Air Resources Board. 2022. "EMFAC2021 Web Database."

# APPENDIX 1

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## Appendix 2:

# CAP Measure Key Metrics

This appendix summarizes the items that the City will use to track implementation of the CAP. As part of San Mateo's ongoing CAP monitoring and implementation efforts, the City will track progress on the implementation of individual measures. The City will collect specific pieces of data, known as key metrics, for each measure, including the planned actions. These key metrics will be used to identify the implementation status of each measure. City staff, utility companies, and state and regional agencies collect the key metrics to track CAP implementation. Some data may be collected through the Development Checklist in **Appendix 3**. Specific information about the sources of each key metric is given in the monitoring tool. The key metrics are shown in **Table 2-1**.





## APPENDIX 2

**Table 2-1: CAP Measure Key Metrics**

Measure		Time Frame	Lead Department	Key Metric
BE 1	All-electric new construction	Near-term	City Manager's Office, Community Development	<ul style="list-style-type: none"> <li>- Number of all-electric new construction residential housing units.</li> <li>- Square feet of all-electric new construction non-residential buildings.</li> </ul>
BE 2	All-electric existing buildings	Near-term	City Manager's Office, Community Development	<ul style="list-style-type: none"> <li>- Number of existing homes with gas to electric HVAC conversions.</li> <li>- Square feet of existing office buildings with gas to electric HVAC conversions.</li> <li>- Number of parking spaces at existing office buildings with EV charging.</li> </ul>
RE 1	Peninsula Clean Energy	Immediate	City Manager's Office	<ul style="list-style-type: none"> <li>- PCE opt-out rate.</li> <li>- kWh supplied by ECO 100</li> </ul>
RE 2	Renewable energy systems for new and existing residences	Immediate	City Manager's Office, Community Development	<ul style="list-style-type: none"> <li>- Number of homes built before 2018 with solar panels.</li> <li>- Number of total homes (existing and new) with battery energy systems.</li> </ul>
RE 3	Renewable energy systems for new and existing nonresidential buildings	Immediate	City Manager's Office, Community Development	<ul style="list-style-type: none"> <li>- Number of businesses built before 2018 with solar panels.</li> <li>- Number of existing businesses with battery energy systems.</li> </ul>
EE 1	Residential energy efficiency retrofits	Near-term	City Manager's Office, Community Development	<ul style="list-style-type: none"> <li>- Number of homes retrofitted.</li> </ul>
EE 2	Nonresidential energy efficiency retrofits	Near-term	City Manager's Office, Community Development	<ul style="list-style-type: none"> <li>- Number of businesses retrofitted.</li> </ul>

# CAP MEASURE KEY METRICS

	Measure	Time Frame	Lead Department	Key Metric
EE 3	Residential tree plantings	Mid-term	City Manager's Office, Parks and Recreation	- Number of households with shade trees.
ME 1	Energy efficiency for new municipal buildings	Mid-term	City Manager's Office, Public Works	None – supportive measure.
ME 2	Energy efficiency at existing municipal buildings	Near-term	City Manager's Office, Public Works	- Square footage of retrofitted municipal buildings.
ME 3	All-electric municipal buildings	Long-term	City Manager's Office, Public Works	- Square feet of existing municipal buildings electrified. - Square feet of new municipal buildings electrified.
CF 1	Electric vehicle charging infrastructure	Immediate	City Manager's Office, Community Development, Public Works	- Number of parking spaces at new nonresidential buildings with EV charging. - Number of parking spaces at existing nonresidential buildings (not including offices) with EV charging. - Number of parking spaces at existing multifamily units with EV charging.
CF 2	Electric vehicle education and outreach	Immediate	City Manager's Office, Community Development	- Estimated number of TNCs operating in San Mateo that are EVs. - Number of residents contacted with EV marketing materials.
CF 3	Clean City fleet	Near-term	Public Works	- Fleet EV VMT. - Fleet biomethane VMT.
CF 4	Clean fuel	Long-term	City Manager's Office, Community Development, Public Works	- Number of hydrogen vehicles registered.

## APPENDIX 2

	Measure	Time Frame	Lead Department	Key Metric
ST 1	Bicycle mode share	Mid-term	Community Development, Public Works	- Total miles of bike lanes.
ST 2	Pedestrian mode share	Near-term	Community Development, Public Works	- Percent increase in pedestrian sidewalks and pathways.
ST 3	Micromobility and shared mobility	Near-term	City Manager's Office, Public Works	None – supportive measure.
ST 4	Public transit services	Near-term	City Manager's Office, Public Works	- Bus network coverage. - Caltrain service frequency.
ST 5	Commuter programs	Mid-term	City Manager's Office, Community Development, Public Works	- Pre-2006 businesses participating in TDM efforts.
ST 6	Transportation Demand Management	Immediate	Community Development, Public Works	- Service population in new development subject to the TDM ordinance.
ST 7	Transit-oriented development	Near-term	Community Development	- New development in TOD zones.
SW 1	Composting program	Immediate	Public Works	- Composting participation levels.
SW 2	Expanded recycling service	Near-term	Public Works	- Total tons of recyclables recovered.
SW 3	Waste awareness and source reduction	Near-term	City Manager's Office, Public Works	- Decrease in non-organic and non-recyclable waste tonnage sent to landfills.
WW 1	Water efficiency retrofits for existing buildings	Mid-term	Public Works	- Number of water efficiency retrofits. - Number of greywater system installations in existing buildings.
WW 2	Water-efficient landscaping	Near-term	City Manager's Office, Parks and Recreation	- Estimated outdoor water use

# CAP MEASURE KEY METRICS

Measure		Time Frame	Lead Department	Key Metric
WW 3	Water efficiency in new construction	Mid-term	Community Development	<ul style="list-style-type: none"> <li>- Number of new homes with greywater systems.</li> <li>- Number of new businesses with greywater systems.</li> </ul>
OR 1	Alternative fuel lawn and garden equipment	Mid-term	City Manager's Office, Parks and Recreation	<ul style="list-style-type: none"> <li>- Estimated percent of landscaping equipment that uses electricity.</li> <li>- Estimated percent of non-landscaping equipment that uses electricity.</li> </ul>







## Appendix 3:

# CAP Consistency Checklist

The following checklist assists project applicants and City staff to determine whether a proposed project complies with the City of San Mateo CAP. The CAP is an implementation tool of the General Plan, demonstrating the City's strategy to reduce greenhouse gas (GHG) emissions consistent with Section 15183.5 of the California Environmental Quality Act (CEQA) Guidelines. New projects deemed consistent with the CAP are eligible for streamlining the analysis of GHG emissions. Projects inconsistent with the CAP may refer to this checklist for informational purposes but may have to submit a separate GHG analysis for the project. Examples of projects inconsistent with the City's forecast include:

- Stationary source emissions regulated by the Bay Area Air Quality Management District.
- General Plan amendments.
- New specific plans, amendments to specific plans, or new development agreements that would increase the population and nonresidential land use expectations beyond those anticipated in the General Plan buildout scenario.



# APPENDIX 3

## Development Checklist

### Project Description Characteristics

Please identify the applicable land uses included in the proposed project and provide a brief description of the proposed project (or the project description to be used for the associated environmental document).

1) What is the size of the project (in acres)?

2) Identify the applicable land uses:

- Residential
- Commercial
- Industrial
- Manufacturing
- Other

3) If there is a residential component to the project, how many units are being proposed?

Single-family residences:	:	
Multi-family residences:	:	

4) Please provide a brief project description, including the square footage of conditioned space by land use:

5) Does the project require any amendments to the General Plan or specific plans?

Yes No

If yes, please explain:

# CAP CONSISTENCY CHECKLIST

6) Is the project located in a specific plan area?

Yes No

If so, which one? \_\_\_\_\_

7) Please complete the following table to identify project compliance with any applicable CAP measures.

## Standards for CAP Consistency – New Development

Reduction Measure and Applicable Standard	Does the Project Comply?	Notes & Comments
<b>BE 1. All new development:</b> The project does not have natural gas connections, and does not have any natural gas appliances or other equipment installed	Yes No N/A	Additional notes:
<b>RE 2. All new developments with residential units:</b> The project includes an on-site renewable energy system that meets or exceeds the minimum requirements of the California State Building Code	Yes No N/A	If yes, what is the kW potential of the renewable energy system?  Additional notes:
<b>RE 2. All new developments with residential units:</b> The project includes an on-site energy storage system, such as a battery.	Yes No N/A	If yes, how much electricity does the system store?  Additional notes:
<b>RE 3. All new developments with nonresidential space:</b> The project includes an on-site renewable energy system that meets or exceeds the minimum requirements of the California State Building Code	Yes No N/A	If yes, what is the kW potential of the renewable energy system?  Additional notes:



# APPENDIX 3

Reduction Measure and Applicable Standard	Does the Project Comply?	Notes & Comments
<b>RE 3. All new developments with nonresidential space:</b> The project includes an on-site energy storage system, such as a battery.	Yes No N/A	If yes, how much electricity does the system store?  Additional notes:
<b>EE 3. All new developments with residential units:</b> The project includes trees that provide shade to residences.	Yes No N/A	If yes, how many residences are shaded by newly planted trees?  Additional notes:
<b>CF 1. All new development with dedicated off-street parking:</b> The project includes parking spaces with installed EV chargers or are pre-wired for EV chargers, consistent with state and any local regulations.	Yes No N/A	If yes, how many spaces include installed EV chargers?  If yes, how many spaces are pre-wired for EV chargers?  Additional notes:
<b>CF 1. All new development with dedicated off-street parking:</b> The project includes parking spaces with installed EV chargers that are accessible by members of the public beyond those who live and/or work at the project.	Yes No N/A	If yes, how many spaces with installed EV chargers are accessible by members of the public?  If yes, how many Level 3 chargers installed as part of this project are publicly accessible?  Additional notes:

# CAP CONSISTENCY CHECKLIST

Reduction Measure and Applicable Standard	Does the Project Comply?	Notes & Comments
<b>ST 6. New developments of at least six multi-family units and/or 10,000 square feet of nonresidential space:</b> Implement TDM strategies to comply with the appropriate trip reduction target identified in applicable area plans and San Mateo Citywide TDM Plan.	Yes No N/A	If yes, what is the trip reduction target for the project? % short-term commute trip reduction % long-term commute trip reduction What strategies will the project use to achieve these trip reduction targets?  Additional notes:
<b>ST 6. Projects of at least 20 multi-family units and/or 50,000 square feet of nonresidential space undergoing additions or alterations (as defined in San Mateo Municipal Code Section 23.06.012):</b> Implement TDM strategies consistent with the targets in relevant area plans and the San Mateo Citywide TDM Plan.	Yes No N/A	If yes, what is the trip reduction target for the project? % short-term commute trip reduction % long-term commute trip reduction What strategies will the project use to achieve these trip reduction targets?  Additional notes:
<b>ST 7. All new development:</b> Be located along El Camino Real, within one-half mile of any Caltrain station, or in the Rail Corridor Transit Oriented Development or Hillsdale Station Area Plan areas.	Yes No N/A	Additional notes:

## APPENDIX 3

Reduction Measure and Applicable Standard	Does the Project Comply?	Notes & Comments
<b>SW 1. All developments with multifamily units or nonresidential space:</b> Provide an area of sufficient space to store and allow access to a compost bin.	Yes No N/A	Does the project participate in any composting programs?  Does the project compost on-site?  Additional notes:
<b>WW 3. All new development:</b> Include a greywater system.	Yes No N/A	If yes, is the greywater system "laundry-to-landscape" or another type of system?  Additional notes:



## Appendix 4:

# Summary of Community Workshop

The City, with support from the PlaceWorks and DNV GL consultant team, hosted a community meeting for the Climate Action Plan (CAP) update on Thursday, June 6, 2019, from 6:00 to 8:00 pm at the San Mateo Public Library.

The purpose of this workshop was to provide community members with an overview of the 2015 CAP and the CAP update process, the results of the new and updated GHG inventory, and the new and revised GHG mitigation measures that will be included in the updated CAP. This workshop offered an opportunity to receive feedback on the measures and suggest additional reduction measures for the CAP.

City staff and members of the consultant team facilitated the workshop. Approximately 50 community members attended and participated. The workshop included a presentation about the CAP update and a summary of work-to-date, a question-and-answer period, and an open house that allowed participants to review draft GHG reduction measures, provide input, and engage with staff, consultants, and other community members. Community members reviewed the proposed measures by placing colored dots next to each measure: green for measures they supported, yellow for measures they supported with some reservations or concerns, and red for measures they did not support.





# APPENDIX 4

The following results are organized by poster topic and present the number and type of dots for each measure (green, yellow, or red) and any open comments received on sticky notes and easel pads. No comment cards were submitted during the meeting, although some additional comments were submitted later via email.

## BOARD 1: RENEWABLE ENERGY

Measure	Greens	Yellows	Reds
Measure 1: Continue to support Peninsula Clean Energy (PCE) and encourage residents and businesses not already participating in PCE, especially large energy users, to join.	17	1	0
Measure 2: Continue promoting renewable energy systems for new homes and businesses with education and incentives.	12	2	0
Measure 3: Continue to encourage property owners to install renewable energy systems on existing homes and businesses.	12	2	0
Measure 4: Renew San Mateo's requirement for new buildings to include solar panels, going beyond state requirements.	11	2	1
Measure 5: Promote battery storage systems as a part of renewable energy installations.	8	6	0
Measure 6: Set up microgrid demonstration projects.	5	5	1

## Renewable Energy Open Comments

**Measure 4:** We need a way to store power from PV to use at night, check out Sandford's [sic] Central Energy Facility's thermal storage/heat recovery.

**Measure 4:** More infill to reduce VMT.

**Measure 6:** There are a lot of bigger things we can do.

**Measure 5:** Batteries – What level of support will this provide? For whom? How rapidly will today's batteries become obsolete if the technology is evolving rapidly?

Will microgrid demonstration have a significant impact?

# SUMMARY OF COMMUNITY WORKSHOP

On/Off grid solar installs - reduce fees if install option to supply power when PCE down to house/buildings.

# APPENDIX 4

## BOARD 2: ENERGY EFFICIENCY AND CONSERVATION

Measure	Greens	Yellows	Reds
Measure 1: Continue to provide education about energy efficiency retrofits to residents and businesses, including information about financing.	9	2	1
Measure 2: Provide incentives for energy efficiency retrofits.	11	1	0
Measure 3: Establish a program to require home energy assessments at the time of sale.	12	2	0
Measure 4: Provide incentives for all-electric new construction.	7	1	0
Measure 5: Encourage upgrades to existing buildings to support all-electric operations.	9	0	0
Measure 6: New municipal buildings and facilities will be all-electric or will use alternative fuels.	9	1	0
Measure 7: Establish a commercial and multi-family energy conservation benchmarking program and offer low- or no-cost energy audits to rental properties and business.	11	0	0
Measure 8: Continue to conduct energy efficiency retrofits for existing municipal buildings.	7	0	0

### Energy Efficiency and Conservation Open Comments

Require Net Zero on existing homes.

Cut energy use everywhere else in the US that is hotter and/or colder than San Mateo: urban infill.

Urge people to wear sweaters etc.

Incentivize cleaner emission leaf blowers (continuing the work sustainability commission started in 2018 then halted).

Make a contest, who can reduce their emissions? Or compare vs. an average.

Require by law, plus shift housing to the public sector.

# SUMMARY OF COMMUNITY WORKSHOP

Prioritize PCE 100 – how does it compare to home retrofits?

Ban military recruiters so our citizens don't participate in the world's worst institutional emitter: the US military.

Incentivize won't save us. If we want to stop Armageddon, we must require sustainable to its fullest extent, right now!

## BOARD 3: ALTERNATIVE TRANSPORTATION

Measure	Greens	Yellows	Reds
Measure 1: Expand the public shuttle system in San Mateo, including using microtransit to provide first-mile and last-mile connections.	23	0	0
Measure 2: Continue to support reduction of commuter-related vehicle trips through the City's Transportation Demand Management program and other employer-focused programs.	11	1	0
Measure 3: Expand carpool options for San Mateo residents and commuters.	3	4	1
Measure 4: Implement the Bicycle Master Plan and continue to support additional shared mobility options.	22	0	1
Measure 5: Continue to make walking a safe and easy way to get around San Mateo.	27	0	0
Measure 6: Increase transit-oriented developments along El Camino Real and near Caltrain stations.	22	3	0
Measure 7: Support new rapid bus transit routes.	14	1	0
Measure 8: Improve the frequency of Caltrain services, particularly to the Hayward Park station.	17	1	0

## Alternative Transportation Open Comments

Increase penalty for stealing bicycles.

Encourage mixed-use development to reduce SOV.



# APPENDIX 4

Close B Street to car traffic and institute shuttle to encourage less driving in City core.

Help change mindset of Peninsula re: BART/Bus Service.

Spend more on GHG Reduction than road maintenance and more truck free roads (weight and potholes) and more car free walking streets.

Eliminate traffic deaths for pedestrians and bicyclists with Vision Zero. New York City is good example.

Sierra Club recommends dividend account parking.

San Mateo needs to be much more bike friendly. 1) more dedicated lanes, 2) lights triggered by bike, 3) Require businesses like Safeway to have bike racks. (1 green)

Citywide mobility targets: Portland does it with target mode share (1 green)

Increase buses and vans use. Incentivize use, increases status of transit use.

More east-west transit opportunities shuttles, scooter, etc.!

Increase bike boulevards and bike infrastructure.

Work from home!!

Need bus-only lanes and transit signal priority. (2 greens)

Bike Streets work North/South (Claremont, Edinburg, Flores).

Create bus routes that allow access to natural public spaces like Laurelwood park and Purisima Creek. This will create love for nature and drive action.

Ridesharing kills public transit, congest streets, and abuses workers. The City must impose a heavy cap on Uber & Lyft vehicles to save our streets.

Light intersections that are triggered by bikes.

Educate residents and visitors on their impacts while driving.

What can the City do to reduce people idling in their cars? (1 green)

# SUMMARY OF COMMUNITY WORKSHOP

Affordable housing = reduced GHGs (2 greens)

Fewer cars, more public transit! Increased frequency in bus service, other non-car modes.

Affordable housing for workers = fewer trip = lower GHG where is housing in the CAP?

Change the topic/sector name – alternative to what?

## BOARD 4: ALTERNATIVE FUELS

Measure	Greens	Yellows	Reds
Measure 1: Require all new buildings to have EV charging infrastructure.	15	5	0
Measure 2: Continue to encourage EV charging infrastructure in existing homes and businesses.	8	0	1
Measure 3: Continue to install EV charging infrastructure in public parking lots and garages.	17	0	1
Measure 4: Transition San Mateo's municipal fleet to electric and other clean-energy vehicles.	15	1	0
Measure 5: Continue to educate community members about the availability of hybrid and clean-fuel landscaping equipment.	13	4	4
Measure 6: Buy hybrid and clean-fuel landscaping equipment for municipal use as options are available.	11	0	0

## Alternative Fuels Open Comments

**Measure 3:** Battery Ready

**Measure 5:** Very low hanging fruit compared to something as important as diet, which is not even mentioned so far. Topic 4, Measure 5

**Measure 5:** Start with large properties like churches, help them through issues like extension cord length limits (if they exist).

## APPENDIX 4

**Measure 5:** Go beyond education. Need a competitive “green yard” program for homeowners. Need to incentivize or network commercial properties and churches to transition them ASAP. The landowners already have equipment for Menlo Park and Atherton!

**Measure 5:** Ordinance to restrict gas landscape equipment.

EVs are great but often not affordable could there be financial incentives and subsidy?

More community charging stations are needed. Will Measure 1 create charging stations that can be shared by the public? Even by registering them with the building or something?

**Measure 2:** Provide incentives!!

**Measure 5:** This will work as well as abstinence-only sex ED

Biodiesel incentives? Can reduce net carbon emissions and use waste oil.

You always mention EI. Cars = No!!! Go hydrogen!

Change the topic/sector name – alternative to what?

### BOARD 5: SOLID WASTE

Measure	Greens	Yellows	Reds
Measure 1: Continue to expand San Mateo’s composting program to businesses and multi-family homes.	25	0	0
Measure 2: Accept new types of materials in recycling bins as economics allow.	8	5	0
Measure 3: Create a materials reuse program and educate community members about ways to make unwanted items available for reuse.	11	2	1
Measure 4: Explore a ban on single-use plastics.	22	6 (Do it! Just do it!)	0
Measure 5: Work with waste haulers to reduce contamination of recyclables.	12	1	0

# SUMMARY OF COMMUNITY WORKSHOP

## Solid Waste Open Comments

Multi-family composting opportunities are a must!! You can also put the collection points in parks and around the community!

If composting in multi-family units is problematic, at least offer compost drop off points through the City!

Recycling info keeps changing. We need way better educations.

Create a mass distribution program for reusable bottle, paid for through business tax hikes.

My condo association will be charged if we get composting so we don't compost.

Solid waste = 3% of the GHG. These programs are good but please do not use a lot of \$\$.

More guidance is needed about good vs. poor recycling habits. (what plastics are good)

Be able to recycle black plastic or don't allow it to be used. (1 green)

I wish we could get more compost delivered to our houses.

Biweekly recycling and garbage pickup instead of weekly? Other cities have tried this. Since San Francisco/Recology has one of the best recycling/zero waste programs in the USA, why not excel at it here in San Mateo! If pickups were fewer, folks might be motivated (or forced) to decrease their waste. Fewer pickups also means less fuel/energy wasted by the trucks.

Tax consumers for clamshells in packaging – like plastic bags.

**Measure 4:** reusable bags require more energy to produce... causing more production.

Stop selling chemicals – pass an ordinance.

People are either uneducated or lazy/noncompliant RE putting items in the correct bins. Adding different/more bins won't work because of this. (2 greens)

Work with Trader Joes, Safeway, etc. to reduce clamshell packaging.

New accurate recycle bin labels for everyone.



# APPENDIX 4

Offer better rates for very low trash creation. Smaller waste cans? Alternate week collection?

Reduce uses at the source, require take back of packaging (3 greens)

Be able to recycle plastic bags that have the recycle symbol.

Encourage reduce purchases consumption. (1 green)

Encourage stores like Costco to put (business + social) pressure on their vendors to use recyclable packaging (not plastics). When vendors figure out recyclable packaging, they should let their customers know about the efforts they have made to solve a problem that affects everyone. Make it a win-win-win situation.

# SUMMARY OF COMMUNITY WORKSHOP

## BOARD 6: WATER AND WASTEWATER

Measure	Greens	Yellows	Reds
Measure 1: Continue to work with water providers and regional agencies to encourage water-efficient retrofits of existing buildings.	21	2	0
Measure 2: Require new developments to meet higher water efficiency standards.	19	1	0

### Water and Wastewater Open Comments

The current CAP should be renamed "Greenhouse Gas Reduction Plan"

The CAP should include water and waste conservation, recycle, reduction mechanisms. (1 green)

Green lawn/yard competition among homeowners.

We need a water committee to implement best practices.

Is there local support for existing greywater systems?

I wish that there was information to have domestic greywater. (Help in putting it in) (5 greens)

Recycle water from treatment plant. (4 greens)

Can the City investigate rainwater collection for use by City and residents?

Are there incentives for lawn replacement/xeriscaping/use of native landscaping?

Lawns are a huge source of water use. They should be abolished!

Large lots and sprawl leads to wasted water for irrigation.

Ban green lawns. (1 green, 1 yellow)

Provide realistic incentives for homeowners to get rid of lawns. Too expensive right now. (1 green)

Can the wastewater treatment plant be run on a schedule that helps address duck curve?

# APPENDIX 4

Educate people with sprinklers to not water the sidewalks!

Looks like real problem is behavior of individual's free will.

Follow best practices from more arid places (landscaping water, recycle water, flow meters on faucets, fix leaks)

Eliminate garbage disposals in new construction and retrofits.

Incentivize water reuse, especially in new development and public buildings (Use SFPUC model). (1 green).

Adopt better water demand management, including conservation, like SFPUC's programs. Reduce outdoor irrigation by 70%.

Aim for 5% reduced imported water by 2024.

## BOARD 7: WHAT'S YOUR BIG IDEA?

### Open comments

Plant more trees.

Plant trees and gardens, every \$1 in trees returns \$2.5 in value to the community. California Billion Tree Initiative. (10 greens)

Build housing here and plant trees elsewhere. (1 green)

Increase the urban tree canopy where possible. (2 greens)

Do not allow wood burnings in fireplaces or building FP in new buildings. (1 green)

Explore rainwater collection for use by city and residents.

To reduce traffic and auto emissions on Hillsdale Ave, employ The Boring Company to put a tunnel under Hillsdale Avenue (2 greens, 5 reds)

Local public free telecommuting centers, reduce VMTs from commuters, keep people and money in San Mateo.

Affordable housing reduced worker trips where is that in CAP? (1 green)

# SUMMARY OF COMMUNITY WORKSHOP

More communication/educations on climate change and CO<sub>2</sub> emissions.

Allow for micro units and affordable housing.

Don't let people cut and trim existing trees and shrubs for view.

Require more from residents (instead of "encourage"). (2 greens)

Bring back recycling stations at Safeway.

The US Military is one of the largest institutional GHG emitters worldwide. Ban military recruiters from San Mateo and stop the rolling war machine in our City.

Include a program for carbon sequestration and offsets.

Ban leaf blowers and gas-powered landscape equipment. (3 greens, 1 red)

- Need a way to transition this would hurt all the gardeners.

No Amazon infrastructure in San Mateo.

Annual reporting of GHG: Mountain View does this and allocates \$10k/year. Sectors can be adjusted for compliance.

Promote the local "I heart rakes and brooms" campaign.

Send a link to all San Mateo residents that helps them calculate their carbon footprint.

Encourage competition among homeowners to use electric lawn equipment to "lose your lawn", to practice permaculture/plant native plants/use IPM methods. Create a City competition!

Determine San Mateo's "earth overshoot" day to raise awareness.

Public housing for all! (With solar panels) (1 green)

City government should fund clothing and farming co-ops in our community to reduce reliance on global trade.

Encourage cooperative businesses (worker owned). Expansion isn't profit seeking drive our crisis and must stop.

Please design new housing near transit centers to have at most car space. Maybe happening already.



# APPENDIX 4

Count on per capita basis and not a total basis.

To avoid 2 degree C temperature rise, there must be a robust system of carbon capture by 2030! (1 green)

Raise the height limit on buildings. (5 greens)

Take advantage of our volunteer hours needed by master composter participants – 40 hours each.

Urban infill: UC Berkeley rates urban infill in the City of San Mateo #1 among all rated measures visit: [coolclimate.berkeley.edu/ca-scenarios/index.html](http://coolclimate.berkeley.edu/ca-scenarios/index.html). (2 greens)

When we add jobs but not housing, we should count 100% of those commute emissions.

Make GHG's info public => competitions in neighborhoods to retrofit/reduce fossil energy use? Smart Meters?

Charge new businesses setting up shop in San Mateo a "sustainability" tax to fund all these projects. (1 green)

Pedestrian overpass at Hillsdale/Highway 101. (3 greens)

More density causes miserable traffic. (1 red)

San Mateo to provide water barrels at cost and volunteer installers too much water is lost.

According to many studies, reaching greenhouse reduction goals without the world adapting a plant-based diet is impossible. Many people in San Mateo are not aware that they can contribute greatly to GHG lowering by modifying their diet. San Mateo should encourage diet change. (3 greens, 1 red)

Increased densities in SFH and transit-oriented areas. Infill housing helps to reduce VMTs. (3 greens)

Implement UN Agenda 21.

Please ban leaf blowers!! Exhaust + PM in the air! (1 green)

Encourage infill development instead of greenfield development.

Figure how to encourage plant-based diet education? (w/ groceries, schools, etc.) Taxes on meat? Don't' just say we have no control over that. (2 greens)

Meatless Monday or eating 1x per day instead of twice. Could this be worked into schools or civic buildings?

# SUMMARY OF COMMUNITY WORKSHOP

Composting toilets save water, reduce methane, turn waste into resources. Make legal, they don't stink!

To reduce commutes and traffic, subsidize ADUs in neighborhoods w/ larger lots, houses, and parking available.  
(1 green)

Way more outreach to non-English speakers. (1 green)

Make sure to do outreach to non-English speakers and people not on City email lists.

## MISCELLANEOUS COMMENTS

Clarifications on process of accounting GHGs, timeline, state vs local actions.

Solar panels – why need in light of PCE? What about city buildings.

Cement emissions- embedded emissions of development.

Data – on implementation measures for example – cool climate Berkeley .edu – consumption based calcs – concerns on highest impact including embedded emissions (infill as example).

# APPENDIX 4

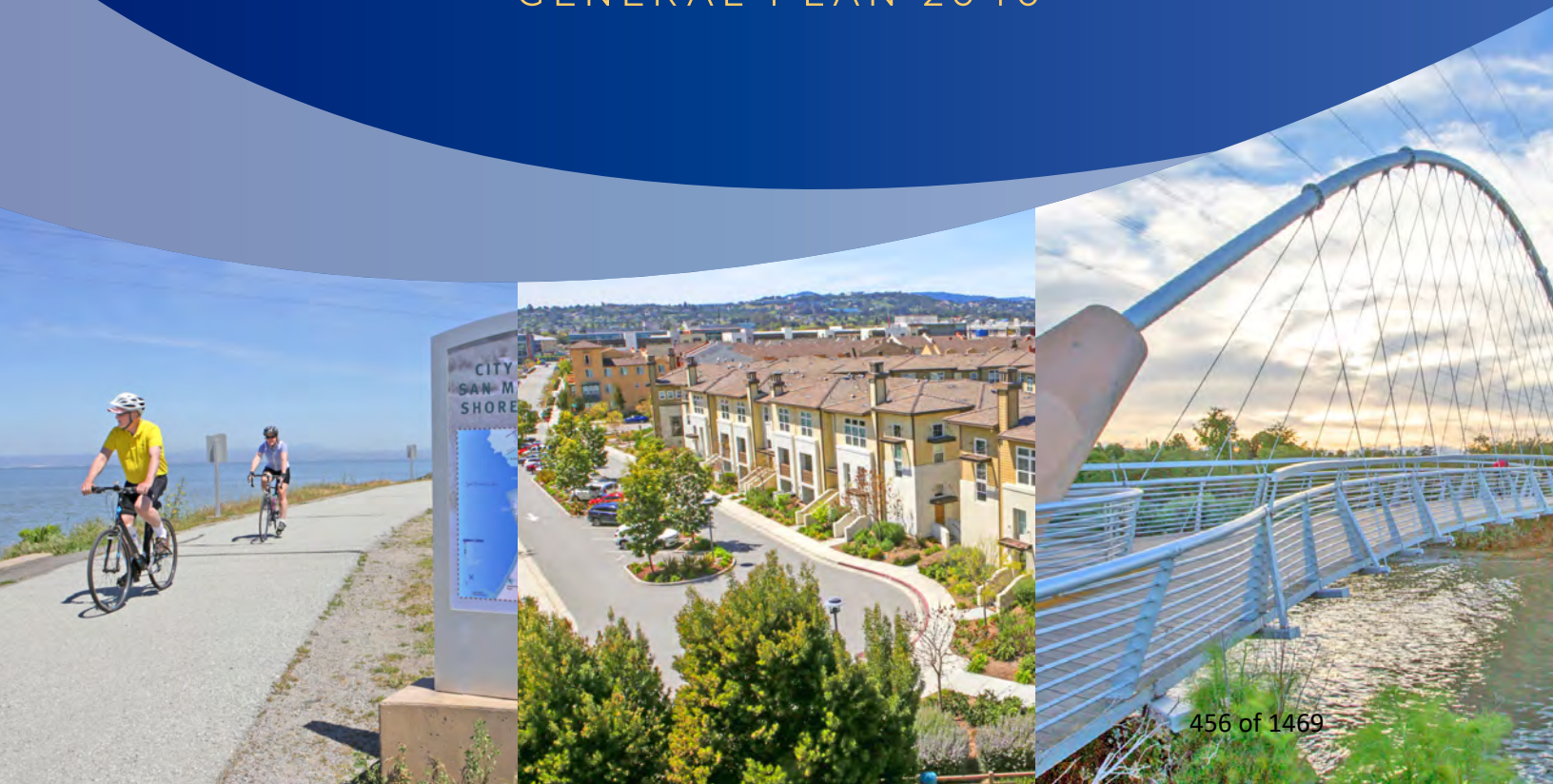


# **STRIVE SAN MATEO**

## **General Plan 2040 and Climate Plan Update Draft EIR**

Public Review Draft | August 2023

**SCH: 2022010160**









# STRIVE SAN MATEO

## General Plan 2040 and Climate Plan Update Draft EIR

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**SCH: 2022010160**



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# 1. Executive Summary

This chapter presents an overview of the proposed Strive San Mateo General Plan 2040 (General Plan 2040 or proposed General Plan) and proposed Climate Action Plan (CAP) update, hereinafter referred to together as “proposed project.” This executive summary also provides a summary of the alternatives to the proposed project, identifies issues to be resolved, areas of controversy, and conclusions of the analysis in Chapters 4.1 through 4.18 of this Draft Environmental Impact Report (EIR). For a complete description of the proposed project, see Chapter 3, *Project Description*, of this Draft EIR. For a discussion of alternatives to the proposed project, see Chapter 5, *Alternatives*, of this Draft EIR.

This Draft EIR addresses the environmental effects associated with adoption and implementation of the proposed project. The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public document designed to provide the public, local, and State government decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This Draft EIR has been prepared pursuant to the requirements of CEQA<sup>1</sup> and the State CEQA Guidelines<sup>2</sup> to determine if approval of the identified discretionary actions and related subsequent development could have any significant impacts on the environment. The City of San Mateo (City), as the lead agency, has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable City technical personnel and review of all technical reports. Information for this Draft EIR was obtained from on-site field observations; discussions with public service agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, greenhouse gas emissions, noise, and transportation).

## 1.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the environmental effects associated with implementation of the proposed project. The main objectives of this document as established by CEQA are:

- To disclose to decision-makers and the public the significant environmental impacts of proposed activities.
- To identify ways to avoid or reduce environmental damage.
- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.

<sup>1</sup> The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000–21177.

<sup>2</sup> The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387.

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- To disclose to the public reasons for agency approval of projects with significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in the CEQA statute and in the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts. An EIR is also one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and adopt a Statement of Overriding Considerations<sup>3</sup> if the proposed project would result in significant impacts that cannot be avoided.

### 1.1.1 REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- **Chapter 1: Executive Summary.** Summarizes environmental consequences that would result from implementation of the proposed project, describes recommended mitigation measures, and indicates the level of significance of environmental impacts with and without mitigation.
- **Chapter 2: Introduction.** Provides an overview describing the Draft EIR document.
- **Chapter 3: Project Description.** Describes the proposed project in detail, including the characteristics, objectives, and the structural and technical elements of the proposed action.
- **Chapter 4: Environmental Analysis.** Organized into 18 subchapters corresponding to the environmental resource categories identified in CEQA Guidelines Appendix G, *Environmental Checklist*, this chapter provides a description of the physical environmental conditions in the vicinity of the proposed project as they existed at the time the Notice of Preparation (NOP) was published and by referencing historic conditions that are supported with substantial evidence, from both a local and regional perspective. Additionally, this chapter provides an analysis of the potential environmental impacts of the proposed project and recommended mitigation measures, if required, to reduce the impacts to less than significant where possible, and to reduce their magnitude or significance when impacts cannot be reduced to a less-than-significant level. The environmental setting included in each subchapter provides baseline physical conditions to provide a context, which the lead agency uses to determine the significance of environmental impacts resulting from the proposed project. Each subchapter also includes a description of the thresholds used to determine if

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<sup>3</sup> CEQA Guidelines Section 15093.

## EXECUTIVE SUMMARY

a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed project; and the potential cumulative impacts associated with the proposed project.

- **Chapter 5: Alternatives to the Proposed Project.** Considers alternatives to the proposed project, including the CEQA-required “No Project Alternative” and “environmentally superior alternative.”
- **Chapter 6: CEQA-Required Conclusions and Findings.** Discusses growth inducement, cumulative impacts, unavoidable significant effects, and significant irreversible changes as a result of the proposed project.
- **Chapter 7: Organizations and Persons Consulted.** Lists the people and organizations that were contacted during the preparation of this EIR for the proposed project.
- **Appendices:** The appendices for this document contain the following supporting documents:
  - Appendix A: Notice of Preparation (NOP) and Comments on the NOP
  - Appendix B: Projects Included in Buildout Projections
  - Appendix C: Air Quality and Greenhouse Gas Emissions Data
  - Appendix D: Noise Data
  - Appendix E: Transportation Data
  - Appendix F: Hazardous Materials Sites

### 1.1.2 TYPE AND PURPOSE OF THIS DRAFT EIR

As described in the CEQA Guidelines, different types of EIRs are used for varying situations and intended uses. Because of the long-term planning horizon of the proposed project and the permitting, planning, and development actions that are related both geographically and as logical parts in the chain of contemplated actions for implementation, this Draft EIR has been prepared as a program EIR for the proposed project, pursuant to CEQA Guidelines Section 15168. Once the program EIR has been certified, subsequent activities within the program must be evaluated to determine whether additional CEQA review is needed. However, where the program EIR addresses the program’s effects as specifically and comprehensively as is reasonably possible, later activities that are within scope of the effects examined in the program EIR, may qualify for a streamlined environmental review process or may be exempt from environmental review. When a program EIR is relied on for a subsequent activity, the lead agency must incorporate feasible mitigation measures and alternatives developed in the program EIR into the subsequent activities.<sup>4</sup> If a subsequent activity would have effects that are not within the scope of the program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, a Mitigated Negative Declaration, or an EIR unless the activity qualifies for an exemption. For these subsequent environmental review documents, this program EIR will serve as the first-tier environmental analysis to streamline future environmental review.

<sup>4</sup> CEQA Guidelines Section 15168[c] and CEQA streamlining provisions.



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### 1.2 SUMMARY OF THE PROPOSED PROJECT

The proposed project would replace the City's existing General Plan, which has a buildout horizon to 2030, with an updated General Plan. The proposed project also involves a technical update to the City's current 2020 CAP to provide consistency between the City's CAP and the proposed General Plan.

The existing San Mateo General Plan 2030 was adopted in 2010. The City determined that the General Plan 2030 provided a good foundation for General Plan 2040. The General Plan 2030 included a comprehensive review process, resulting in a broad range of community goals and policies. Many of the community issues vetted in General Plan 2030 are still relevant, well addressed, and do not require major change. Therefore, while the approach to the proposed General Plan 2040 is a comprehensive update, it builds off of the current General Plan 2030 and carries forward topics and themes of community importance and priority. The proposed General Plan 2040 will also integrate topics that are now required by State mandate and revise relevant policies and actions to meet those requirements. It also incorporates regional forecasts for 2040, thus moving the planning horizon forward by 10 years. Chapter 3, *Project Description*, of this Draft EIR includes a detailed description of the proposed project.

### 1.3 SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

This Draft EIR analyzes alternatives to the proposed project that are designed to reduce the significant environmental impacts of the proposed project and feasibly attain most of the proposed project objectives. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves weighing and balancing all of the environmental resource areas by the City. The following alternatives to the proposed project were considered and analyzed in detail:

- **No Project Alternative (Current General Plan).** Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, Alternative A presents the No Project scenario. Accordingly, under this alternative the proposed project would not be adopted or implemented, and further development in the city would continue to be subject to existing policies, regulations, development standards, and land use designations under the existing General Plan 2030.
- **Reduced Traffic Noise Alternative.** The Reduced Traffic Noise Alternative would involve enhanced transportation demand management (TDM) requirements to reduce vehicle travel to a greater extent than under the proposed project. This alternative would accommodate the same amount of proposed development as the proposed project and would involve the same General Plan land use map and designations.

Chapter 5, *Alternatives to the Proposed Project*, of this Draft EIR, includes a complete discussion of these alternatives. As discussed in Chapter 5, Alternative B: Reduced Traffic Noise, is the Environmentally Superior Alternative pursuant to CEQA Guidelines Section 15126.6.

## 1.4 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the City of San Mateo, as lead agency, related to:

- Whether this Draft EIR adequately describes the environmental impacts of the proposed project.
- Whether the benefits of the proposed project override environmental impacts that cannot be feasibly avoided or mitigated to a level of insignificance.
- Whether the identified goals, policies, or mitigation measures should be adopted or modified.
- Whether there are other mitigation measures that should be applied to the proposed project besides those goals, policies, or mitigation measures identified in the Draft EIR.
- Whether there are any alternatives to the proposed project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic objectives.

## 1.5 AREAS OF CONTROVERSY

The City issued an NOP on January 12, 2022. The CEQA-mandated 30-day scoping period for this EIR was between January 12, 2022, and February 11, 2022, during which interested agencies and the public could submit comments about the potential environmental impacts of the proposed project. During this time, the City received 43 comment letters from a variety of State agencies as well as a local organization and members of the public.

The following is a discussion of issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process. Though every concern applicable to the CEQA process is addressed in this Draft EIR, this list is not necessarily exhaustive, but rather attempts to capture concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- Biological resources (special-status species, aquatic habitat, sensitive natural communities, riparian habitat, tree loss)
- Cultural and tribal cultural resources (historic resources and districts, tribal cultural resources)
- Hydrology and water quality (flooding, sea level rise)
- Land use and planning (zoning)
- Population and housing (projected growth)
- Public services (fire and police services staffing)
- Transportation (vehicle miles traveled (VMT), public transit)
- Utilities and service systems (infrastructure capacity and water availability)
- Wildfire (wildfire evacuation, emergency response)

## EXECUTIVE SUMMARY

### 1.6 SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Table 1-1, *Summary of Significant Impacts and Mitigation Measures*, summarizes the conclusions of the environmental analysis in this Draft EIR and presents a summary of significant impacts and mitigation measures identified. For a complete description of potential impacts, including those where no mitigation measures are required, please refer to the specific discussions in Chapters 4.1 through 4.18.

## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
<b>AESTHETICS</b>			
<i>No significant impacts</i>			
<b>AIR QUALITY</b>			
<b>AQ-2:</b> Construction of development projects that could occur from implementation of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds and cumulatively contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.	<b>S</b>	<p><b>AQ-2:</b> Prior to discretionary approval by the City for development projects subject to CEQA (California Environmental Quality Act) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with Bay Area Air Quality Management District (BAAQMD) methodology for assessing air quality impacts identified in BAAQMD's <i>CEQA Air Quality Guidelines</i>. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the City shall require feasible mitigation measures to reduce air quality emissions. Measures shall require implementation of the BAAQMD Best Management Practices for construction-related fugitive dust emissions, including:</p> <ul style="list-style-type: none"> <li>Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) at least twice daily or as often as needed to control dust emissions.</li> <li>All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</li> <li>All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.</li> <li>All vehicle speeds on unpaved roads shall be limited to 15 mph.</li> <li>All roadways, driveways, sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seedling or soil binders are used.</li> <li>All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.</li> <li>All trucks and equipment, including their tires, shall be washed off prior to leaving the site.</li> <li>Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compact layer of wood chips, mulch, or gravel.</li> </ul>	<b>SU</b>

S = Significant; SU = Significant and Unavoidable



## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		<ul style="list-style-type: none"> <li>Prior to the commencement of construction activities, individual project proponents shall post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.</li> </ul> <p>Measures shall be incorporated into appropriate construction documents (e.g., construction management plans) and shall be verified by the City.</p>	
<b>AQ-3:</b> Operation of development projects under the proposed project would generate operational emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO <sub>x</sub> ).	<b>S</b>	<p><b>AQ-3:</b> Prior to discretionary approval by the City for development projects subject to California Environmental Quality Act (CE) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project operational air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with Bay Area Air Quality Management District (BAAQMD) methodology in assessing air quality impacts identified in BAAQMD's current <i>CEQA Air Quality Guidelines</i> at the time that the project is considered.</p> <p>If operation-related air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the City shall require the project applicant(s) to incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval or a mitigation monitoring and reporting plan adopted for the project as part of the project CEQA review. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:</p> <ul style="list-style-type: none"> <li>Implementing commute trip reduction programs.</li> <li>Unbundling residential parking costs from property costs.</li> <li>Expanding bikeway networks.</li> <li>Expanding transit network coverage or hours.</li> <li>Using cleaner-fueled vehicles.</li> <li>Exceeding the current Title 24 Building Envelope Energy Efficiency Standards.</li> <li>Establishing on-site renewable energy generation systems.</li> <li>Requiring all-electric buildings.</li> <li>Replacing gas-powered landscaping equipment with zero-emission alternatives.</li> </ul>	<b>SU</b>

S = Significant; SU = Significant and Unavoidable

## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
<b>AQ-4:</b> Construction emissions associated with development under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District's project-level and cumulative significance thresholds.	<b>S</b>	<ul style="list-style-type: none"> <li>Implementing organics diversion programs.</li> <li>Expanding urban tree planting.</li> </ul> <p><b>AQ-4:</b> Prior to discretionary approval by the City, project applicants for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes) or Overburdened Community, as measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City for review and approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District (BAAQMD). If the HRA shows that the cumulative and project-level incremental cancer risk, noncancer hazard index, and/or PM<sub>2.5</sub> exceeds the respective threshold, as established by BAAQMD (all areas of the City and Sphere of Influence) and project-level risk of 6.0 in Equity Priority Communities at the time a project is considered, the project applicant will be required to identify best available control technologies for toxics (T-BACTs) and appropriate enforcement mechanisms, and demonstrate that they are capable of reducing potential cancer, noncancer risks, and PM<sub>2.5</sub> to an acceptable level. T-BACTs may include but are not limited to:</p> <ul style="list-style-type: none"> <li>Restricting idling on-site beyond Air Toxic Control Measures idling restrictions</li> <li>Electrifying warehousing docks</li> <li>Requiring use of newer equipment</li> <li>Requiring near-zero or zero-emission trucks for a portion of the vehicle fleet based on opening year.</li> <li>Truck Electric Vehicle (EV) Capable trailer spaces.</li> <li>Restricting off-site truck travel through the creation of truck routes.</li> </ul> <p>T-BACTs identified in the HRA shall be included as part of the conditions of approval or a mitigation monitoring and reporting plan adopted for the project as part of the project CEQA review.</p>	<b>SU</b>
<b>AQ-6:</b> Implementation of the proposed project would generate a substantial increase in emissions that exceeds the Bay Area Air Quality Management	<b>S</b>	<b>AQ-6:</b> Implement Mitigation Measures AQ-2, AQ-3, and AQ-4.	<b>SU</b>

S = Significant; SU = Significant and Unavoidable

## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
District's significance thresholds and would cumulatively contribute to the nonattainment designations and health risk in the San Francisco Bay Area Air Basin.			
<b>BIOLOGICAL RESOURCES</b>			
<i>No significant impacts</i>			
<b>CULTURAL RESOURCES</b>			
<i>No significant impacts</i>			
<b>ENERGY</b>			
<i>No significant impacts</i>			
<b>GEOLOGY AND SOILS</b>			
<i>No significant impacts</i>			
<b>GREENHOUSE GAS EMISSIONS</b>			
<i>No significant impacts</i>			
<b>HAZARDS AND HAZARDOUS MATERIALS</b>			
<i>No significant impacts</i>			
<b>HYDROLOGY AND WATER QUALITY</b>			
<i>No significant impacts</i>			
<b>LAND USE AND PLANNING</b>			
<i>No significant impacts</i>			
<b>NOISE</b>			
<b>NOISE-1:</b> Buildout under the proposed project is anticipated to result in unacceptable traffic noise with an increase of more than 5.0 dBA $L_{dn}$ over existing conditions along one roadway segment (1 <sup>st</sup> Avenue west of B Street) within the EIR Study Area.	<b>S</b>	None available.	<b>SU</b>
<b>NOISE-6:</b> Buildout under the proposed project is anticipated to result in unacceptable cumulative traffic noise within the EIR Study Area.	<b>S</b>	None available.	<b>SU</b>

S = Significant; SU = Significant and Unavoidable

## EXECUTIVE SUMMARY

**TABLE 1-1 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

Environmental Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
<b>PARKS AND RECREATION</b>			
<i>No significant impacts</i>			
<b>POPULATION AND HOUSING</b>			
<i>No significant impacts</i>			
<b>PUBLIC SERVICES</b>			
<i>No significant impacts</i>			
<b>TRANSPORTATION</b>			
<i>No significant impacts</i>			
<b>TRIBAL CULTURAL RESOURCES</b>			
<i>No significant impacts</i>			
<b>UTILITIES AND SERVICE SYSTEMS</b>			
<i>No significant impacts</i>			
<b>WILDFIRE</b>			
<b>WILD-2:</b> Development under the proposed project would increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.	<b>S</b>	None available.	<b>SU</b>
<b>WILD-5:</b> Potential development under the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones, or Wildland Urban Interface, result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.	<b>S</b>	None available.	<b>SU</b>

S = Significant; SU = Significant and Unavoidable



## EXECUTIVE SUMMARY

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## 2. Introduction

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Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Chapter 14, California Code of Regulations, Section 15378[a], the proposed Strive San Mateo General Plan 2040 (General Plan 2040 or proposed General Plan) and proposed Climate Action Plan (CAP) update are considered a “project” subject to environmental review. Their implementation is “an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.” This Draft Environmental Impact Report (EIR) provides an assessment of the potential environmental consequences of adoption and implementation of the General Plan 2040 and CAP update, herein referred to as the “proposed project.”

This Draft EIR identifies mitigation measures and alternatives to the proposed project that would avoid or reduce potentially significant impacts. The Draft EIR also compares the development potential of the proposed project with the existing baseline condition that is described in detail in each section of Chapter 4, *Environmental Analysis*, of this Draft EIR. The City of San Mateo (City) is the lead agency for the proposed project. This assessment is intended to inform the City’s decision-makers, other responsible agencies, and the public-at-large of the nature of the proposed project and its potential effect on the environment.

### 2.1 PROPOSED ACTION

If approved by the San Mateo City Council, the proposed project would replace the City’s existing General Plan 2030, which has a buildout horizon to 2030, with an updated General Plan 2040. The proposed project would build off the existing General Plan 2030, which was last comprehensively updated in 2010, to provide a framework for land use, transportation, and conservation decisions through the horizon year of 2040. The proposed project would also update the buildout projections used in the City’s Climate Action Plan to be consistent with the updated General Plan 2040 and this Draft EIR.

The environmental analysis in this Draft EIR assumes that the adoption and implementation of the proposed project would result in up to 20,080 new households, 21,410 new housing units, 52,020 new residents, and 16,920 new employees by 2040. See Chapter 3, *Project Description*, of this Draft EIR for additional details on the proposed project. See Chapter 5, *Alternatives*, for a comparison of the current General Plan 2030 and the proposed General Plan 2040.

### 2.2 EIR SCOPE

This Draft EIR is a program EIR that analyzes the adoption and implementation of the proposed project. This is in contrast to a project-level EIR, which is used to identify and analyze the potential impacts of

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site-specific construction and operation. CEQA and the CEQA Guidelines allow lead agencies to prepare different types of EIRs for varying situations and intended uses. Section 15168 of the CEQA Guidelines states that program EIRs are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria.

In this case, the proposed project that is the subject of this Draft EIR consists of long-term plans that would be implemented over time as policies guiding future development activities and City actions. No specific development projects are proposed as part of the proposed project, and decisions about whether to move forward with development projects on individual properties will continue to be made by the property owner. Therefore, as a program EIR, it is not project specific and does not evaluate the impacts of individual projects that may be proposed in the future under the General Plan 2040. However, where the program EIR addresses the effects of the proposed project as specifically and comprehensively as is reasonably possible, later activities that are within the scope of the effects examined in the program EIR may qualify for a streamlined environmental review process or may be exempt from environmental review.<sup>1</sup>

When a program EIR is relied on for a subsequent activity, the lead agency must incorporate feasible mitigation measures and alternatives developed in the program EIR into the subsequent activities.<sup>2</sup> If a subsequent activity would have effects that are not within the scope of the program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, a Mitigated Negative Declaration, or an EIR, unless the activity qualifies for an exemption. For these subsequent environmental review documents, this program EIR will serve as the first-tier environmental analysis to streamline future environmental review.

## 2.3 ENVIRONMENTAL REVIEW PROCESS

### 2.3.1 DRAFT EIR

Pursuant to CEQA Section 21080(d) and CEQA Guidelines Section 15063, the City determined that the proposed project could result in potentially significant environmental impacts and that a program EIR would be required. In compliance with CEQA Section 21080.4, the City circulated the Notice of Preparation (NOP) of an EIR for the proposed project to the Office of Planning and Research (OPR) State Clearinghouse (SCH) and interested agencies and persons on January 12, 2022, for a 30-day review period. A public scoping meeting was held on January 25, 2022 at the San Mateo City Council Chambers. The NOP and scoping process solicited comments regarding the scope of the Draft EIR from responsible and trustee agencies and interested parties. Appendix A, *Notice of Preparation and Scoping Comments*, of this Draft EIR contains the NOP and the comments received by the City in response to the NOP.

This Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 45-day comment period starting August 11, 2023 and ending September 25, 2023.

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<sup>1</sup> CEQA Guidelines Section 15168(c) and CEQA streamlining provisions.

<sup>2</sup> CEQA Guidelines Section 15168(c)(3) and CEQA streamlining provisions.

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During the comment period, the public is invited to provide written comments on the Draft EIR via mail or email to the City of San Mateo Planning Division by 5:00 p.m. on September 25, 2023. Comments should be submitted as follows:

- Written: Manira Sandhir, Planning Manager  
City of San Mateo, Community Development Department  
330 West 20th Avenue  
San Mateo, CA 94403
- Phone: (650) 522-7203
- Email: [msandhir@cityofsanmateo.org](mailto:msandhir@cityofsanmateo.org) with “San Mateo General Plan Draft EIR” as the subject line.

### 2.3.2 FINAL EIR

Upon completion of the public review period for the Draft EIR, the City will review all written comments received and prepare written responses to each comment on the adequacy of the Draft EIR. A Final EIR will then be prepared, which contains all of the comments received, responses to comments raising environmental issues, and any changes to the Draft EIR. The Final EIR will then be presented to the San Mateo Planning Commission where a public hearing will be held for public comments on the Final EIR. During this public hearing, recommendations will also be considered for certification of the Final EIR. Following the public hearing, the Final EIR will be presented to City Council for consideration of the certification as the environmental document for the proposed project. All persons who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing, which is tentatively scheduled for early 2024.

All responses to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to certification of the EIR. The City Council will make findings regarding the extent and nature of the impacts as presented in the EIR. The EIR will need to be certified as having been prepared in compliance with CEQA by the City prior to making a decision to approve or deny the proposed project. Public input is encouraged at all public hearings before the City.

If the City Council certifies the EIR, it may then consider action on the proposed project. If approved, the City Council would adopt and incorporate all feasible mitigation measures identified in the EIR and may also require other feasible mitigation measures.

In some cases, the City Council may find that certain mitigation measures are outside the jurisdiction of the City to implement, or that no feasible mitigation measures have been identified for a given significant impact. In that case, the City Council would have to adopt a statement of overriding considerations that determines that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, significant effects on the environment.

### 2.3.3 MITIGATION MONITORING

CEQA Section 21081.6 requires that the lead agency adopt a Mitigation Monitoring and Reporting Program (MMRP) for any project for which it has made findings pursuant to CEQA Section 21081. Such a



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program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR. If mitigation measures are required, the MMRP for the proposed project will be completed congruently as part of the Final EIR process.

## 2.4 USE OF THE GENERAL PLAN EIR

CEQA includes several provisions to streamline the environmental review of qualified projects based on several factors. These include where environmental review has already occurred (e.g., a program-level EIR), which could apply to future development in the EIR Study Area.

The CEQA concept of "tiering" refers to the evaluation of general environmental matters in a broad program-level EIR, with subsequent focused environmental documents for individual projects. CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. This is accomplished in tiered documents by eliminating repetitive analyses of issues that were adequately addressed in the program EIR and by incorporating those analyses by reference.

Section 15168(d) of the CEQA Guidelines provides for simplifying the preparation of environmental documents by incorporating by reference analyses and discussions. Where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to effects that were not analyzed as significant in the prior EIR or that are susceptible to substantial reduction or avoidance (CEQA Guidelines Section 15152[d]).

By tiering from the program EIR, the environmental analysis for a future project would rely on the program EIR for the following:

1. A discussion of general background and setting information for environmental topic areas;
2. Overall growth-related issues;
3. Issues that were evaluated in sufficient detail in the program EIR for which there is no significant new information or change in circumstances that would require further analysis;
4. Assessment of cumulative impacts; and
5. Mitigation measures adopted and incorporated into the proposed project.

As a program EIR, this document and the mitigation measures presented herein will be used as a guide for implementing the General Plan 2040 policies and actions, as well as adopting changes in City codes, regulations, and practices. This program EIR will also be used as a base resource for reviewing future development projects. This document will assist in guiding the assessment of projects and provide environmental review tiering, where appropriate. Currently, the City's development review process includes the following steps, which will be carried forward under the adopted General Plan 2040:

- **Determine Project Consistency with the General Plan and City Codes.** When a new development project is filed with the City, it is reviewed for completeness and consistency with the General Plan goals, policies, and actions, and City codes and practices. Because the impact avoidance measures

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have been incorporated into the General Plan 2040, development projects will inherently implement these measures to: a) mitigate environmental impacts; and b) achieve consistency with the General Plan and compliance with City codes.

- **Determine Requirements for Project-Level Environmental Review.** City staff are responsible for determining the level of environmental review required by CEQA for each development project.
  - **Projects Subject to Environmental Review.** For future development projects subject to environmental review, the information and analysis contained within this EIR and carried forward in the General Plan 2040 will guide the scope of this review. For project-level environmental review, many of the topic areas studied in this program EIR will adequately cover and provide environmental clearance for the project. However, the preparation of site-specific studies and reports may be necessary based on the location and nature of the development project. The information and analysis presented in this program EIR will assist in determining when and where a special, site-specific study is warranted. Examples are shown on Figure 4.3-1, *Special-Status Plant Species and Sensitive Natural Communities*, and Figure 4.3-2, *Special-Status Animal Species and Critical Habitats*, in Chapter 4.3, *Biological Resources*, of this Draft EIR. These figures map geographic areas where special-status species are known to exist, which will provide guidance on where and when to require a technical study of biological resources.
  - **Projects Exempt from Environmental Review.** CEQA includes a long list of environmental review exemptions. Most future development projects that are consistent with General Plan 2040 will likely be exempt from environmental review as the project impacts will be adequately covered by this program EIR. However, many of the CEQA exemptions require compliance with specific criteria for the development project to qualify for the exemption. The information and analysis contained within this EIR and carried forward in the General Plan 2040 will be used to assist in determining if the CEQA-prescribed criteria have been met to qualify for the exemption. One example of a CEQA exemption is for development projects located in a “Transit Priority Area” (TPA). Further information on CEQA exemptions for development in a TPA is provided in Chapter 4, *Environmental Analysis*.

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### 3. Project Description

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This chapter of the Draft Environmental Impact Report (EIR) describes the proposed Strive San Mateo General Plan 2040 (General Plan 2040 or proposed General Plan) and proposed Climate Action Plan (CAP) update, hereinafter referred to together as “proposed project.” This project description has been prepared pursuant to the California Environmental Quality Act (CEQA).<sup>1</sup> The proposed project includes potential new development associated with implementation of General Plan 2040 and implementation of the proposed CAP update. The potential buildout under General Plan 2040 is discussed in Section 3.6, *2040 Development Projections*, of this chapter.

This Draft EIR has been completed in accordance with CEQA, which requires that State and local public agencies analyze proposed projects to determine potential impacts on the environment and disclose any such impacts.<sup>2</sup> The City is the lead agency for the environmental review of the proposed project. Chapter 4, *Environmental Analysis*, of this Draft EIR provides a programmatic analysis of the environmental impacts associated with projected development under the proposed project by 2040. Program-level environmental review documents are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria.<sup>3</sup> The proposed project that is the subject of this EIR consists of long-term plans that will be implemented as policy documents guiding future development activities and City actions. Because this is a program-level EIR, this document does not evaluate the impacts of specific, individual development projects that may be allowed under General Plan 2040. Future projects may require separate environmental review.

This chapter provides a detailed description of the proposed project, including the location, setting, and characteristics of the EIR Study Area, which is described in Section 3.3, *EIR Study Area*, as well as the project objectives, the principal project components, and required permits and approvals.

#### 3.1 BACKGROUND

Every city and county in California is required to have an adopted comprehensive long-range general plan for the physical development of the county or city and, in some cases, land outside the city or county boundaries.<sup>4</sup> It is the community’s overarching policy document that defines a vision for future change and sets the “ground rules” for locating and designing new projects, supporting the local economy, conserving resources, improving public services and safety, and fostering community health. The General Plan, which includes a vision, guiding principles, goals, policies, and actions, functions as the City’s primary land use regulatory tool. It is San Mateo’s constitution for future change and must be used

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<sup>1</sup> CEQA Guidelines Section 15126.

<sup>2</sup> CEQA Guidelines Section 15002(a).

<sup>3</sup> CEQA Guidelines Section 15168.

<sup>4</sup> California Government Code Section 65300.



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as the basis for all planning-related decisions made by City staff, the Planning Commission, and the City Council.

Pursuant to State law, a general plan must contain eight mandated elements: land use, circulation, housing, conservation, open space, noise, environmental justice, and safety; organized in any way that best suits the city or county. Typically, general plans cover a time frame or forecast of 15 to 20 years.

The existing San Mateo General Plan 2030 (General Plan 2030) was adopted in 2010 and included a horizon year of 2030. Four elements of the General Plan 2030 (land use, circulation, urban design, and housing) were amended in 2020. Accordingly, a comprehensive update is necessary to respond to and reflect the community's aspirations, address changes in State planning law, and extend the planning horizon to 2040. As described in greater detail in Section 3.5.1.2, *General Plan 2040 Outline*, General Plan 2040 includes the elements required by State law,<sup>5</sup> as follows: 1) Land Use; 2) Circulation; 3) Housing; 4) Community Design and Historic Resources; 5) Conservation, Open Space and Recreation; 6) Public Services and Facilities; 7) Safety; and 8) Noise.

General Plan Housing Elements are required to be updated every eight years to fulfill the Regional Housing Needs Allocation (RHNA) and comply with State law. To meet the State deadline, San Mateo's Housing Element was most recently updated in January 2023 through a separate process. The Housing Element was prepared consistent with existing General Plan 2030 land use designations and policies and was covered under a CEQA Exemption. The Housing Element is not part of the proposed project analyzed in this EIR.

All plans, including precise plans, specific plans, master plans, and zoning in the city must be consistent with the General Plan. Similarly, all land-use development approvals and environmental decisions made by the City Council must be consistent with the General Plan. The General Plan itself, however, does not approve or entitle any development project. Property owners have control over when they wish to propose a project, and final development approval decisions are made on a project-by-project basis by City staff, the Planning Commission, other City boards and commissions as appropriate, and/or the City Council. Accordingly, this Draft EIR only addresses what the City foresees at this time. Future projects that exceed the proposed buildout or boundaries addressed in this Draft EIR will be subject to additional environmental review, as required pursuant to CEQA and the CEQA Guidelines.

## 3.2 LOCATION AND SETTING

The city of San Mateo is in the eastern part of central San Mateo County. It is generally bounded by the San Francisco Bay to the north; Burlingame to the northwest; Hillsborough to the west; unincorporated county land to the southwest; Belmont to the south; and Foster City to the east. See Figure 3-1, *Regional and Vicinity Map*. The city is accessed by US Highway 101 and State Route 92 (SR-92) as well as three

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<sup>5</sup> Pursuant to State law, a general plan must contain mandatory elements, but has complete autonomy for how they format and organize the elements. Mandatory topics include: land use, circulation, housing, conservation, open space, noise, safety, and environmental justice.

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Caltrain transit stations. Interstate 280 (I-280) also provides regional access to the community and is located just west of the City's Sphere of Influence (SOI). San Mateo is the largest city in San Mateo County and includes a range of urban and suburban land uses, including a variety of residential neighborhoods, an historic downtown, parks, and commercial and office areas. San Mateo's built-out environment is largely consistent with the built-out environments of adjacent communities.

### 3.2.1 CITY LIMITS

San Mateo City Limits enclose an area of approximately 15.46 square miles, of which 3.40 square miles consist of the Bay Waters, and the remaining 12.06 square miles consist of land. The City has primary authority over land use and other governmental actions within this area. Certain unincorporated areas outside of the City Limits may still have a San Mateo mailing address and may share certain services with the City. This includes unincorporated areas such as the Peninsula Golf and Country Club and the San Mateo Highlands neighborhoods, which are not within San Mateo's City Limits, but are within San Mateo's SOI.

### 3.2.2 SPHERE OF INFLUENCE

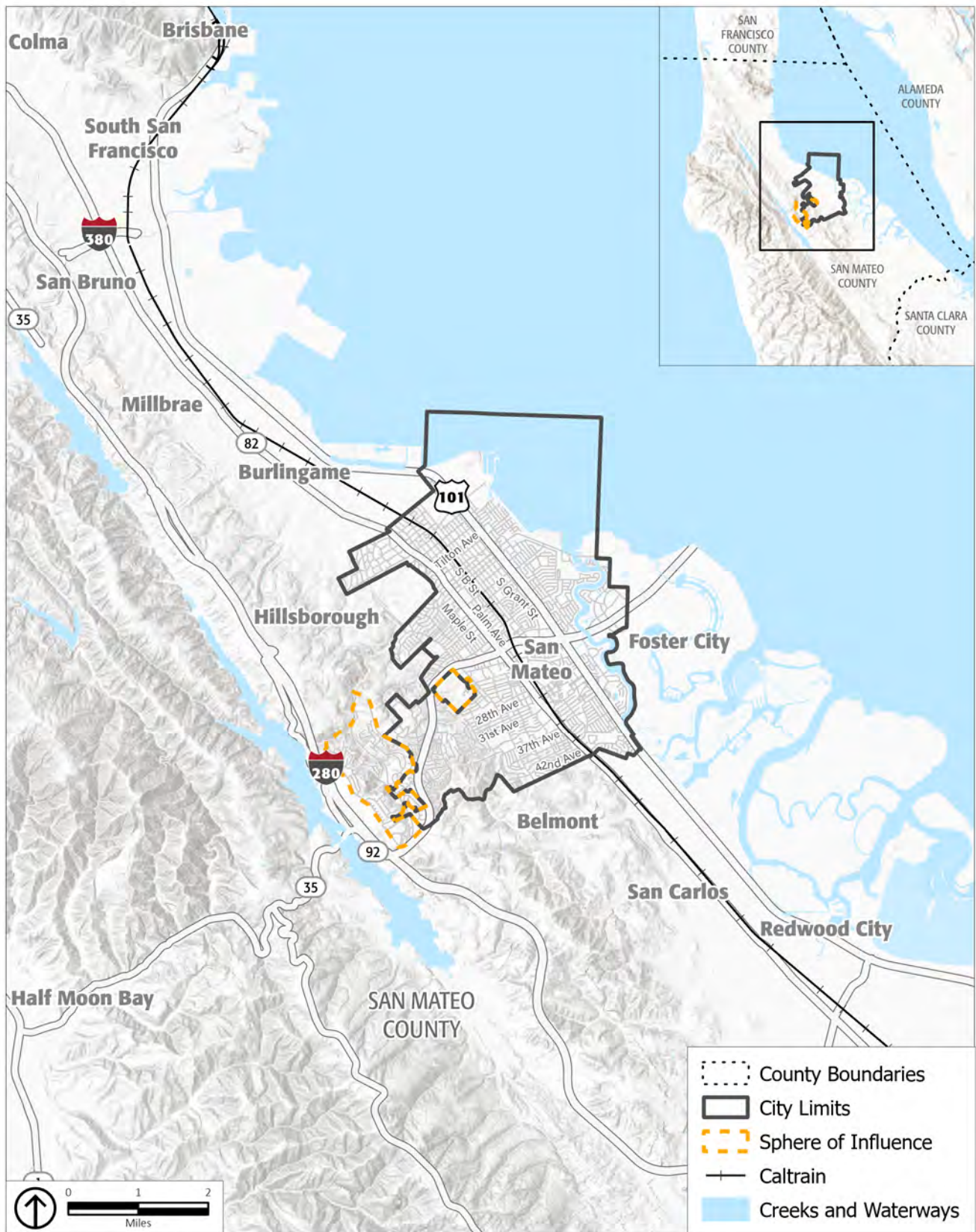
The SOI is a boundary that identifies land that the City may potentially annex in the future, and for which urban services, if available, could be provided upon annexation. Under State law, the SOI is established by the San Mateo County Local Agency Formation Commission (LAFCO) with input from the City. The purpose of the SOI is to identify areas where urban development could be accommodated in the future in an orderly and efficient manner. The San Mateo SOI is approximately 1.58 square miles in size, including both land and water.

Unincorporated areas adjacent to the San Mateo City Limits fall under the planning, land use, and regulatory jurisdiction of San Mateo County. While the City does not have jurisdiction over land within the SOI, designating a SOI sets precedence for ensuring that the City is able to comment on development proposed for lands within the SOI prior to annexation and to begin considering future development of the area. The City does not propose to annex any areas within the SOI as part of the proposed project. Any future annexations that may occur within the 2040 planning horizon would be analyzed under separate environmental review.

## 3.3 EIR STUDY AREA

The State of California encourages cities to look beyond their borders when undertaking the sort of comprehensive planning required for a general plan. The City only has jurisdiction over land that is within the City Limits. However, the City maintains a role in land use decisions in its SOI. Therefore, the EIR Study Area consists of all land within the City of San Mateo's City Limits and SOI. These areas are described below and shown on Figure 3-2, *EIR Study Area*. See Chapter 4, *Environmental Analysis*, for a description of the cumulative impact scope for this EIR, which may include lands within the Study Area and beyond, depending on the environmental topic being analyzed.

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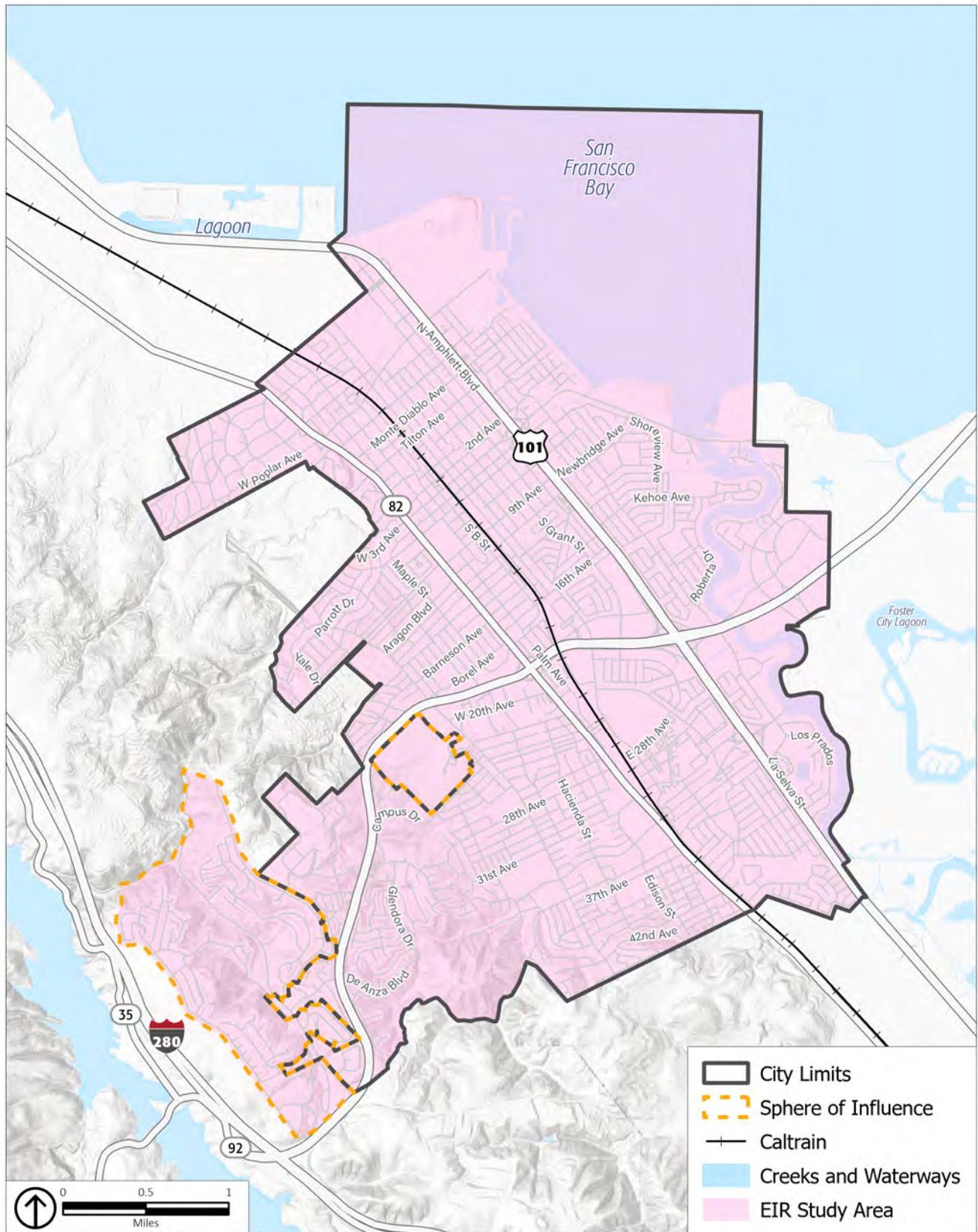


Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 3-1  
Regional and Vicinity Map



PROJECT DESCRIPTION



Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 3-2  
EIR Study Area



## PROJECT DESCRIPTION

### 3.4 PROJECT OBJECTIVES

The primary purposes of the proposed project are to plan for the growth and conservation of San Mateo over a 20-year time horizon and to:

- Identify the location and allowed density and intensity of San Mateo's land uses including housing, businesses, industry, open space, schools, civic buildings, etc.
- Plan for future circulation and infrastructure improvements.
- Identify sufficient residential land to meet the current and future housing needs for people at all income levels.
- Protect natural resources, such as water, air, trees, and hillsides, and preserve and improve open spaces, including open space for recreation, for habitat, or for public health and safety.
- Protect residents from harmful or disruptive levels of noise.
- Keep the community safe from natural and human-caused hazards, such as earthquakes, landslides, floods, and wildfires, including increased risks from climate change.
- Improve the safety and quality of life for residents of neighborhoods that face a combination of both higher-than-average pollution exposure and social and economic challenges such as low incomes, language barriers, or housing instability (Equity Priority Areas).

### 3.5 PROJECT COMPONENTS

The proposed project updates the General Plan 2030 goals, policies, and programs (actions) to reflect current conditions, issues, resources, and community perspectives. For example, changes are needed to address the evolving state of the city and region and to cover global issues such as climate change and emerging transportation technologies. The update also incorporates regional forecasts for 2040 that extend the planning horizon forward by 10 years.

#### 3.5.1 GENERAL PLAN 2040

##### 3.5.1.1 PLANNING PROCESS

The City maintains a website for the proposed project at [www.strivesanmateo.org](http://www.strivesanmateo.org). The website offers opportunities for the public to weigh in on key issues and download information about the project and will continue to be available throughout the environmental review and project approval process. City staff also solicited input from other public agencies, such as the County of San Mateo, local school districts, the San Mateo County Transportation Authority, and cities adjacent to San Mateo.

The public outreach and participation process for the proposed General Plan 2040 started in September 2018. Throughout the process, the City shared information and sought community input at each decision point. Community input was gathered at community workshops on the proposed General Plan 2040, booths at community events, online activities, presentations to community organizations, and pop-up

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events at local businesses, churches, parent group meetings, food distribution centers, and bus stops. Throughout the General Plan 2040 process, the City Council emphasized extensive community outreach to engage all residents, with a focus on inclusive outreach programs to ensure engagement from non-English speakers as well as those fluent in English, renters as well as homeowners, residents under the age of 44, low-income households, and underrepresented neighborhoods including North Shoreview, Shoreview, North Central, and East of US Highway 101. City staff held pop-up events and workshops in the underrepresented neighborhoods and saw an increase in participation from these targeted groups.

The City Council also appointed a seven-member General Plan Subcommittee (GPS) to serve as a sounding board for City staff on draft policies and programs. The GPS was responsible for reviewing and commenting on draft materials and serving as a liaison to the community through various in-person, virtual, and hybrid meetings from 2018 to 2023.

The land use alternatives explored different possible growth scenarios for how to accommodate future housing, jobs, commercial and retail establishments, and parks and open space. The process to create the land use alternatives and to ultimately select a preferred land use scenario took almost three years and was shaped by community input at every significant step of the process. In general, each step of the alternatives process included a similar series of meetings: first, community workshop(s), outreach events, and online engagement; then GPS meeting(s), followed by Planning Commission meeting(s); and lastly City Council direction.

A summary of the steps to create the land use alternatives, and ultimately a preferred land use scenario included:

- **Choosing Study Areas.** During the summer and fall of 2019, San Mateo community members were asked to provide input at workshops, meetings, and online to help identify areas of the city that have the most potential for change over the next 20 years (“General Plan Land Use Study Areas”). The ten General Plan Land Use Study Areas selected by the community had the following characteristics: are near transit; contain aging shopping centers; or are areas where people have expressed interest in considering redevelopment of the property through the General Plan Update process. Study Area boundaries are mapped in Figure 3-3, *Study Area Boundaries*.
- **Creating a range of alternatives for each Study Area.** In the winter of 2019, community members shared their ideas on the different types and range of development that should occur in each Study Area. Using public feedback gathered in-person and online, and GPS, Planning Commission, and City Council provided input on the range of alternatives, and the General Plan team (City staff and project consultants) prepared three draft land use and transportation alternatives. These draft alternatives considered different locations and intensities of development that could occur over the next 20 years for each Study Area.
- **Evaluating and comparing alternatives.** On August 16, 2021, the City Council provided direction on the three land use and circulation alternatives to evaluate. The General Plan team then began evaluating the alternatives to compare their differing outcomes against a set of metrics.
- **Selection of a preferred scenario for further study.** On January 14, 2022, the City published the Alternatives Evaluation Report on [www.StriveSanMateo.org](http://www.StriveSanMateo.org) and began the community engagement process to choose a preferred scenario for land use and circulation based on the relative benefits,

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trade-offs, potential impacts and desired mix of growth and development of each alternative. Following GPS and Planning Commission meetings, on April 18, 2022, the City Council provided final direction on the preferred land use and circulation scenario, which was created by mixing and matching different combinations of housing and commercial development in each Study Area.

### 3.5.1.2 GENERAL PLAN 2040 OUTLINE

The proposed General Plan 2040, like the existing General Plan 2030, addresses the eight mandatory elements (denoted with an asterisk [\*] in the list below) and five optional elements. Multiple elements can be combined into one chapter, such as the mandatory open space and conservation elements in Chapter 5, *Conservation, Open Space, and Recreation*. Environmental justice policies as well as sustainability policies and community engagement policies are incorporated throughout the proposed General Plan 2040. The proposed outline for the General Plan 2040 includes 12 chapters (8 of which are “elements”):

- |   |   |
|---|---|
| 1. Introduction                                     | 7. Public Services and Facilities Element |
| 2. Land Use Element*                                | 8. Safety Element*                        |
| 3. Circulation Element*                             | 9. Noise Element*                         |
| 4. Housing Element* ( <i>prepared separately</i> )  | 10. Appendices                            |
| 5. Community Design and Historic Resources Element  | 11. Glossary                              |
| 6. Conservation, Open Space and Recreation Element* | 12. Acknowledgements                      |

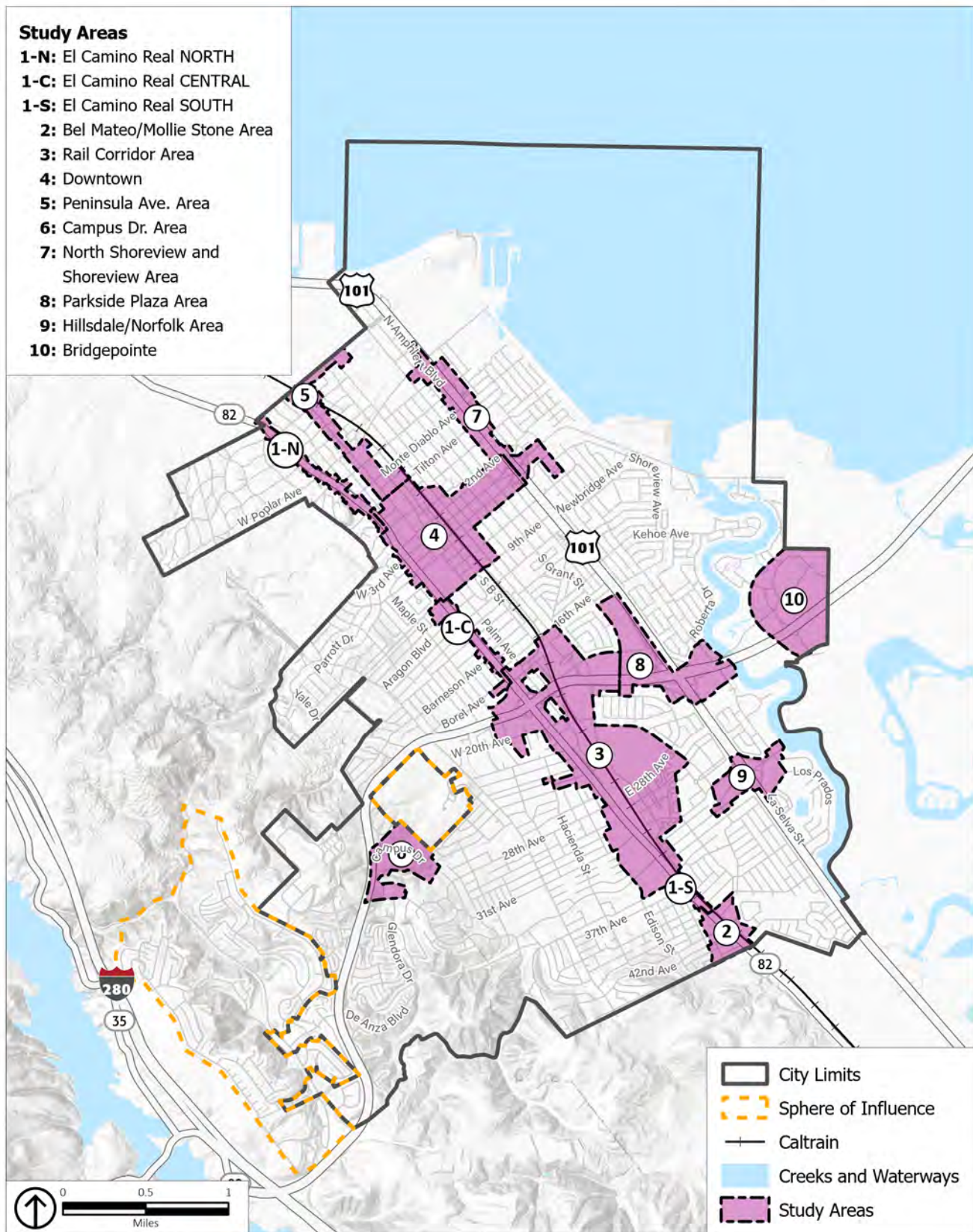
### 3.5.1.3 GENERAL PLAN GOALS, POLICIES, AND ACTIONS

Each element of the proposed General Plan 2040 contains background information and a series of goals, policies, and actions. The following provides a description of goals, policies, and actions and explains the relationship between them:

- A *goal* is a description of what San Mateo wants to achieve—the end state.
- A *policy* is a specific or general statement of principle, positions, or approaches on a particular issue or subject that guides decision-making by City staff, commissions, and/or the City Council. Use of verbs like “require” or “prohibit” (or “must” or “shall”) indicate mandatory requirements, and verbs like “support” or “discourage” (or “should” or “may”) indicate case-by-case flexibility, although parameters can be set for such statements.
- An *action* (also known as a program) is a procedure or activity by the City to achieve or implement a specific policy and/or goal. Actions may be day-to-day activities of City staff, or larger one-time initiatives. Actions may also require cooperation with other agencies not under the City’s control.

In addition to requirements of State laws, the goals, policies, and actions in the proposed General Plan 2040 are influenced by community input, best practices, and emerging issues (e.g., environmental justice, sea level rise, autonomous vehicles, and green infrastructure).

## PROJECT DESCRIPTION



Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 3-3  
Study Area Boundaries

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### 3.5.1.4 GENERAL PLAN LAND USE DESIGNATIONS

This section describes the changes to the existing General Plan land use categories that are proposed as part of the General Plan 2040. Collectively, these changes may influence the types and intensities of land uses permitted on different sites in the city.

The proposed General Plan 2040 proposes a number of changes to the land use designations from the existing General Plan land use map. This section describes the major changes, however, it is provided for informational purposes only. This EIR does not evaluate the changes in the General Plan relative to the existing General Plan, but rather evaluates the impacts of the proposed General Plan relative to existing conditions, as required by CEQA Guidelines Section 15126.2, Consideration and Discussion of Significant Environmental Impacts. The proposed General Plan 2040 includes the following new and revised land use designations:

- **Residential Very Low.** Previously called the Single-Family Residential designation, this designation allows very low density residential dwellings, such as detached single-family homes, detached townhouses and duplexes, and accessory dwelling units (ADUs) at an allowed density of up to 9 dwelling units per acre (du/acre) and an allowed height of 1 to 3 stories. This designation previously allowed residential dwellings at a density of up to 9 dwelling units per acre.
- **Residential Low I.** Previously called the Low Density Multi-Family Residential designation, this designation allows low density residential dwellings, such as townhomes, duplexes, triplexes, and fourplexes, condominiums, and apartments at an allowed density of 9 to 19 dwelling units per acre and an allowed height of 1 to 3 stories. This designation previously allowed low density attached residential dwellings at a density of 9 to 17 dwelling units per acre.
- **Residential Low II.** Previously called the Medium Density Multi-Family Residential designation, this designation allows lower density attached residential dwellings, such as townhomes, duplexes, triplexes, and fourplexes, condominiums, and apartments at an allowed density of 20 to 35 dwelling units per acre and an allowed height of 2 to 4 stories. This designation previously allowed low density attached residential dwellings at a density of 18 to 35 dwelling units per acre.
- **Residential Medium I.** Previously called the High Density Multi-Family Residential designation, this designation is a transition between areas designated with a Residential Low and Residential High and allows multi-family dwellings, such as townhomes, condominiums, and apartments at an allowed density of 36 to 50 dwelling units per acre and allowed height of 3 to 5 stories.
- **Residential Medium II.** This is a new designation. This designation allows medium density multi-family residential dwellings, such as condominiums and apartments, near mixed-use, office, and/or commercial areas. This designation is applied along major streets such as El Camino Real and as a transition between areas designated with a Residential Low and Residential High at an allowed density of 51 to 99 dwelling units per acre and an allowed height of 4 to 6 stories. This designation previously allowed residential uses at a density of 36 to 50 dwelling units per acre.
- **Residential High I.** This is a new designation. This designation allows higher density multi-family residential dwellings, such as condominiums and apartments, near Downtown and Caltrain stations, and along major streets such as El Camino Real, at an allowed density of 100 to 125 dwelling units per acre and an allowed height of 5 to 8 stories.



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- **Residential High II.** This is a new designation. This designation allows higher density multi-family residential dwellings, such as condominiums and apartments, near Downtown and Caltrain stations, and along major streets such as El Camino Real, with an allowed density of 100 to 200 dwelling units per acre and an allowed height of 6 to 10 stories.
- **Mixed-Use Low.** Previously called the Mixed-Use Incentive designation, this designation allows a mix of commercial, office, and/or residential uses integrated within the same site or the same building. It is intended to allow a mix of uses that encourages people to live, work, play, and shop in close proximity. The allowed density in the Mixed-Use Low designation ranges from 10 to 35 dwelling units per acre with an allowed height of 2 to 4 stories. The maximum Floor Area Ratio (FAR) for nonresidential uses in the Mixed-Use Low designation is 2.0 FAR.
- **Mixed-Use Medium I.** Previously called the Mixed-Use Incentive designation, this designation allows a mix of commercial, office, and/or residential uses integrated within the same site or the same building. It is intended to allow a mix of uses that encourages people to live, work, play, and shop in close proximity. The allowed density in the Mixed-Use Medium I designation ranges from 36 to 50 dwelling units per acre with an allowed height of 3 to 5 stories. The maximum FAR for nonresidential uses in the Mixed-Use Low Medium designation is 3.0 FAR. Previously, the Mixed-Use Incentive designation had a FAR of 1.0 to 3.0.
- **Mixed-Use Medium II.** Previously called the Mixed-Use Incentive designation, this designation allows a mix of commercial, office, and/or residential uses integrated within the same site or the same building. It is intended to allow a mix of uses near other mixed-use, commercial, or residential areas, and within Downtown. The allowed density in the Mixed-Use Medium II designation ranges from 51 to 99 dwelling units per acre with an allowed height of 4 to 6 stories. This designation will also have a maximum 4.0 FAR for nonresidential uses. Previously, the Mixed-Use Incentive designation had a FAR of 1.0 to 3.0.
- **Mixed-Use High I.** This is a new designation. This designation allows high density mixed-use buildings that provide a mix of commercial, office, and/or residential uses integrated within the same site or building. It is intended to allow a mix of uses near major streets, Caltrain stations, shopping centers, and within Downtown. The allowed density in the Mixed-Use High I designation ranges from 100 to 130 dwelling units per acre with an allowed height of 5 to 8 stories. The maximum FAR for nonresidential uses in Mixed-Use High I areas is 4.5.
- **Mixed-Use High II.** This is a new designation. This designation allows high density mixed-use buildings that provide a mix of commercial, office, and/or residential uses integrated within the same site or building. It is intended to allow a mix of uses near major streets, Caltrain stations, and shopping centers, and within Downtown. The allowed density in the Mixed-Use High II designation ranges from 100 to 200 dwelling units per acre with an allowed height of 6 to 10 stories. The maximum FAR for nonresidential uses in the Mixed-Use High II designation is 5.0.
- **Office Low.** Previously called the Executive Office designation, this designation is intended for low density office uses, such as medical, administrative, or professional offices. Supportive uses including personal services, restaurants, health clubs, residential, day care, and limited retail sales are permitted. Research facilities that support the development of new products and may include professional uses, manufacturing, laboratories, and/or maker's spaces in the same building or site may be permitted depending on the type and intensity of the use. The maximum FAR for non-

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residential uses in this designation is 1.0 with an allowed height of 1 to 2 stories. The allowed density for residential uses is 10 to 35 dwelling units per acre. Previously, the Executive Office designation had a FAR of 0.62 to 1.0.

- **Office Medium.** Previously called the Executive Office designation, this designation is intended for medium density office uses, such as medical, administrative, or professional offices. Supportive uses including personal services, restaurants, health clubs, residential, day care, and limited retail sales are permitted. Research facilities that support the development of new products and may include professional uses, manufacturing, laboratories, and/or maker's spaces in the same building or site may be permitted depending on the type and intensity of the use. The maximum FAR for non-residential uses in this designation is 2.0 with an allowed height of 2 to 4 stories. The allowed density for residential uses is 36 to 50 dwelling units per acre. Previously, the Executive Office designation had a FAR of 0.62 to 1.0.
- **Office High.** This is a new designation. This designation is intended for high density office uses, such as medical, administrative, or professional offices, and for research and science facilities that support the development of new products and may include professional uses, manufacturing, laboratories, and/or maker's spaces in the same building or site. Supportive uses including personal services, restaurants, health clubs, residential, day care, and limited retail sales are permitted. The maximum FAR for non-residential uses in this designation is 3.0 with an allowed height of 3 to 5 stories. The allowed density for residential uses is 51 to 130 dwelling units per acre.
- **Quasi-Public.** This is a new designation. This designation is intended for facilities owned and/or operated by quasi-public agencies and organizations, such as schools and faith based organization facilities. Examples of these facilities include St. Matthew Catholic Church and the Nueva School. Ancillary residential uses, with a focus on affordable housing, may also be allowed when aligned with the organization's mission or to provide employee housing. The allowed height is 1 to 3 stories for uses in this designation and the density for residential uses is up to 20 dwelling units per acre.

In addition to the changes listed above, the proposed General Plan 2040 would carry forward the same land use designations from the existing General Plan 2030 as follows:

- **Neighborhood Commercial.** This designation is intended for a mix of neighborhood-serving commercial uses that include small-scale small retail stores and other commercial uses that serve the immediate neighborhood, such as grocery stores and pharmacies. Typical uses include supermarkets, bakeries, drugstores, restaurants, delicatessens, barber shops, hair salons, laundromats, hardware stores, dry cleaners, small offices, and other personal services. Residential may also be allowed. The maximum FAR for nonresidential uses in this designation is 1.0 with an allowed height of 1 to 3 stories. The allowable density for residential uses is 9 to 19 density units per acre.
- **Service Commercial.** This designation is intended for a wide range of service commercial and light industrial facilities that provide city-wide and regional services including auto repair services, building material yards, overnight boarding of animals, and industrial uses with light manufacturing, warehousing, and/or distribution facilities. These uses do not necessarily benefit from being in high volume pedestrian areas such as shopping centers or Downtown and can instead be found along South Amphlett Avenue, south of Indian Avenue and north of 2<sup>nd</sup> Avenue, in addition to other

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locations around the city. The maximum FAR for this designation is 1.0 with an allowed height of 1 to 3 stories.

- **Regional Commercial.** This designation is intended for large-scale commercial developments that serve residents and visitors from the surrounding region, such as the Hillsdale Mall and Bridgepointe Shopping Center. Examples of this land use include shopping centers, large-format retail, auto sales, and travel-related services, such as hotels, gas stations, and restaurants. These centers rely on larger trade areas. Residential may also be allowed. The maximum FAR for nonresidential uses in this designation is 1.5 with an allowed height of 1 to 3 stories. The allowable density for residential uses is up to 50 density units per acre.
- **Public Facilities.** This designation is intended for facilities owned and/or operated by the City or other governmental agencies, such as City Hall, San Mateo County's Event Center, public school sites and the public parking garages in Downtown. There is no maximum FAR for uses in this designation.
- **Parks and Open Space.** This designation is intended for public parks, City-owned conservation lands and private open space or recreation facilities. Parks and open space areas can be found throughout the city and are important to preserve because they provide community members with access to nature, encourage healthy lifestyles, and support a mixture of active and passive recreation opportunities. There is no maximum FAR in this designation.
- **Utilities.** This designation is intended for facilities owned and/or operated by public utilities to serve the public with electricity, gas, water and communications. Examples of uses in this designation include electricity substations, water tank sites, and the sewer treatment plant. There is no maximum FAR for uses in this designation.

The land use designations that are being retired and will not be part of the proposed General Plan 2040 land use designations include:

- Single-Family Residential designation
- Low Density Multi-Family Residential designation
- Medium Density Multi-Family Residential designation
- High Density Multi-Family Residential designation
- Mixed-Use Incentive designation
- Executive Office designation

### 3.5.1.5 GENERAL PLAN 2040 LAND USE MAP

The General Plan land use map demonstrates the location of each land use designation, which is a required component of general plans. The existing General Plan 2030 land use map shown in Figure 3-4, *Current General Plan Land Use Map*, has been used since 2010 to illustrate the proposed distribution, location, and extent of housing, businesses, industries, open space, recreation, education, and public buildings within the horizon of each general plan. The General Plan land use map reflects a combination of existing conditions and different or more intense uses in locations where change is desired in the next 20 years. The proposed General Plan 2040 land use map is shown on Figure 3-5, *Proposed General Plan 2040 Land Use Map*.

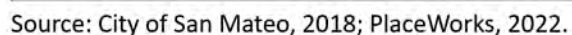
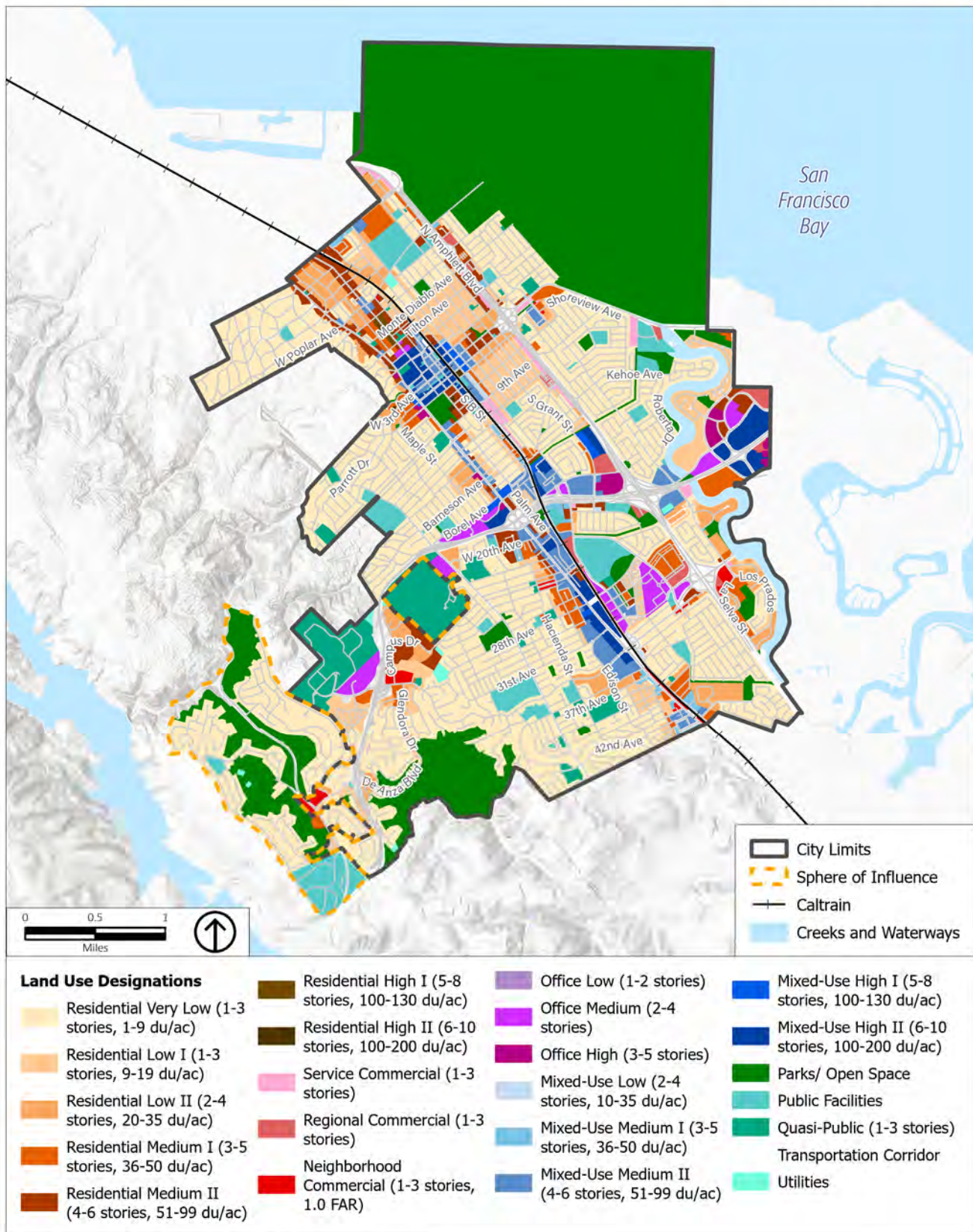


Figure 3-4  
Current General Plan Land Use Map



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Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 3-5  
Proposed General Plan 2040 Land Use Map

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The City's General Plan land use map is integrated with the City's zoning map, which shows the parcel-specific delineation of the zoning districts throughout the city and depicts permitted and conditionally permitted uses. A parcel's zoning district stems directly from its General Plan land use designation, with the zoning district acting to implement the General Plan by refining the specific uses and development standards for that parcel. Updates to the zoning map to ensure consistency with the proposed General Plan 2040 Land Use Map will follow the adoption of General Plan 2040 through a separate process. Changes to the City's Zoning Code or zoning map are not part of the proposed project covered in this EIR.

### 3.5.1.6 TRANSPORTATION AND INFRASTRUCTURE IMPROVEMENTS

Implementation of General Plan 2040 could involve physical improvements to carry out the following transportation and infrastructure actions:

- Implementation of the Complete Streets Plan to improve the circulation network for all users and abilities and the Bicycle Master Plan to create and maintain a fully connected, safe, and logical bikeway network.
- Implementation of a Vision Zero Plan to reduce speeding, collisions, and collision severity.
- Implementation of an El Camino Real Plan for higher capacity and higher frequency transit along El Camino, potentially including Bus Rapid Transit and other modes of alternative transportation.
- Implementation of a Transit-Oriented Development Access Plan to build priority projects.
- Implementation of "safe routes for seniors" and "safe routes to schools" improvements, prioritized in disadvantaged communities.
- Shuttle services as part of new developments, to fulfill transportation demand management (TDM) requirements, as well as continued support for public shuttle programs.
- Pedestrian improvements to improve comfort, safety, and connectivity, and collaboration with San Mateo County to develop trails.
- Implementation of an Americans with Disabilities Act (ADA) Transition Plan to maintain accessible streets and sidewalks.
- Transition of B Street between 1<sup>st</sup> Street and 3<sup>rd</sup> Street into a pedestrian mall.
- Freeway overcrossings and undercrossings to facilitate connectivity across major barriers.
- Coordination with the Town of Hillsborough, the County of San Mateo, and the State regarding pedestrian and bicycle access to San Francisco Water District lands via Crystal Springs Road.
- Grade crossing improvements and/or separation for at-grade rail crossings.
- Implementation of the Transit Orientated Development Pedestrian Access Plan to improve transit access, safety, and experience.
- Installation of public bicycle parking facilities.
- Implementation of an updated Downtown Area Plan to support and strengthen Downtown San Mateo as a vibrant and active district.

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- Implementation of an updated Hillsdale Station Action Plan to improve circulation and access to the Station, and increase park and open space areas.
- Implementation of a Bridgepointe Area Plan to guide redevelopment of the Bridgepointe Shopping Center into a mixed-use neighborhood with new parks and recreational facilities, community gathering places, and ample facilities to support safe transit, biking, and walking access.
- Preparation and implementation of a specific plan or master plan for the Bel Mateo area to guide redevelopment of the area into a mixed-use neighborhood with ample facilities to support biking and walking, as well as publicly accessible park and open space areas.
- Preparation and implementation of a North Central Plan to make the neighborhood's streets safer and improve circulation.
- Streetscape and safety improvements to improve routes to parks, schools, recreation facilities, and other destinations through sidewalk, lighting, landscaping, and roadway improvements.
- Upgrades to critical facilities and public infrastructure in areas vulnerable to climate change hazards, such as the wastewater treatment plant.
- Implementation of a facilities improvement plan to address deficiencies in community centers and recreation spaces.
- Installation of new street trees to expand the urban tree canopy.
- Potential development of regional recreational and sports complexes, in collaboration with neighboring cities.
- Implementation of the Recreation Facilities Master Plan, prioritizing the highest priority improvements.
- Potential distribution of recycled water, in collaboration with California Water Service and/or Estero Municipal Improvement District.
- Implementation of the City's Green Infrastructure Plan.
- Support for improved access to and availability of state-of-the-art telecommunication systems, in coordination with service providers.
- Undergrounding of electrical and communication transmission and distribution lines in residential areas and along commercial frontages.
- Support for the expansion of electric vehicle charging stations and clean fuel stations.
- Potential installation of on-site power generation and storage on City facilities.
- Improvements to critical infrastructure to allow continued functioning in the event of a power outage.
- Improvements to City assets and infrastructure for seismic stability.

Some of the improvements above would occur through the continuation of existing City programs and procedures, such as the City's Capital Improvement Program and ongoing street maintenance services, while others would involve the development of new programs to study, design, and fund future

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improvement projects. As indicated above, many of these improvements would occur only after separate planning processes, after which specific improvements would be implemented consistent with those planning documents. In addition, many of the improvements called for in General Plan 2040 would be implemented by other agencies or entities, such as neighboring cities, the County of San Mateo, transit agencies, neighborhood organizations, service providers, and private developers. This program-level analysis of General Plan 2040 does not evaluate project-level impacts of future specific improvement projects that may be proposed in the future to implement General Plan 2040 and other City planning documents. All future construction projects that qualify as a “project” under CEQA are subject to compliance with CEQA, which may require additional, project-specific environmental analysis for entitlement. Therefore, though subsequent environmental review may tier off the program-level review in this EIR, this EIR is not intended to provide project-level environmental review of specific future construction projects.

### 3.5.2 CLIMATE ACTION PLAN UPDATE

The City’s existing CAP was adopted in April 2020. It provides a strategic pathway to reduce greenhouse gas (GHG) emissions through 2050 and beyond, with reduction target commitments for 2020, 2030, and 2050 based on Assembly Bill (AB) 32, Senate Bill 32, and Executive Order S-03-05, respectively. The CAP serves as a qualified GHG reduction strategy consistent with CEQA Guidelines 15183.5(b). Strategies in the CAP fall into the following general categories:

- Building electrification
- Renewable energy
- Energy efficiency
- Municipal energy efficiency and electrification
- Off-road equipment
- Clean transportation fuels
- Sustainable transportation
- Solid waste
- Waste and wastewater

The CAP includes forecasts of GHG emissions that rely on estimates of vehicles miles traveled (VMT) modeled by the Association of Bay Area Governments/Metropolitan Transportation Commission and the City’s growth assumptions at the time of CAP preparation, which are consistent with the assumptions in the 2030 General Plan. Maintaining consistency between the CAP and 2030 General Plan has been a goal of the City’s with each update of the CAP.

The proposed General Plan 2040 is expected to allow higher levels of population, jobs, households, and VMT compared to the CAP adopted in 2020. In addition, since the City’s adoption of the CAP in 2020, the State of California has accelerated its actions and commitments to reduce statewide GHG emissions. In September 2022, the Governor signed AB 1279 into law, codifying the State’s commitment to be carbon neutral by 2045. As part of this commitment to carbon neutrality, AB 1279 directs a minimum statewide reduction of GHGs to at least 85 percent below 1990 levels by 2045. As a result of this recently adopted target, the City’s CAP may not be consistent with the State’s 2045 target. Additionally, the California Air Resources Board adopted the new version of the Climate Change Scoping Plan on December 15, 2022,



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and the Scoping Plan further details the role of local governments in the achievement of the statewide GHG reduction targets.

The proposed CAP update is a technical update to the CAP to provide consistency between the City's CAP and the proposed General Plan. Under the CAP update, the CAP will continue to serve as the City's qualified GHG reduction strategy, as it has since 2015. As a qualified GHG reduction strategy, it is important for the CAP to be consistent with the proposed General Plan and State reduction targets. The approach for this technical update is consistent with the Bay Area Air Quality Management District (BAAQMD) guidance available. The proposed CAP update includes:

- Revisions to previous inventory years including the 2005 baseline.
- An updated GHG emissions inventory for the year of 2019.
- A revised forecast year of 2030, consistent with the CAP adopted in 2020.
- A new forecast year of 2040, consistent with the buildout year for the proposed General Plan development projections evaluated in this EIR.
- A new forecast for 2045, consistent with the State's new GHG reduction goal per AB 1279.
- Updated GHG reduction targets and reduction measure quantification to align with the updated forecast years.

In total, the CAP update projects that San Mateo will reduce its GHG emissions to 311,990 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) (45 percent below 1990 levels) by 2030, 162,530 MTCO<sub>2</sub>e by 2040 (71 percent below 1990 levels), and 80,550 MTCO<sub>2</sub>e (86 percent below 1990 levels) by 2045. These reductions allow San Mateo to meet its GHG reduction targets of 40 percent below 1990 levels (339,880 MTCO<sub>2</sub>e) by 2030, and 85 percent below 1990 levels (84,970 MTCO<sub>2</sub>e) by 2045.

The proposed CAP update does not include any substantive updates to the strategies in the CAP. The CAP strategies would not result in changes to land use under the proposed General Plan.

### 3.6 2040 DEVELOPMENT PROJECTIONS

This EIR analyzes the potential for growth between 2019 and 2040, which represents an approximate 20-year buildout horizon. Under Section 15064(d) of the CEQA Guidelines, "In evaluating the significance of the environmental effect of a project, the lead agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project." The projections represent the City's estimation of "reasonably foreseeable" development that could occur over the next 20 years under the General Plan and are used as the basis for the EIR's environmental assessment. See Chapter 4, *Environmental Analysis*, of this Draft EIR, for a description of environmental analysis scenarios for this EIR.

The projections do not presume that every parcel is developed to the maximum level allowed under the General Plan. Based on historical development patterns, it is unlikely that the maximum theoretical buildout allowed under the proposed General Plan 2040 would occur because not every parcel that is allowed to develop will develop within that timeframe, and not every parcel that develops will be built out to the maximum allowed under the proposed General Plan 2040. Therefore, the maximum theoretical buildout is not a reasonably foreseeable outcome of the adoption of the proposed General

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Plan 2040. Instead, this EIR analyzes a conservative, but reasonably foreseeable, amount of growth based on regional demographic and economic forecasts and the probable share of regional growth that would be captured by San Mateo given the proposed policies and land use regulations in General Plan 2040. Horizon year (2040) projections within the EIR Study Area are shown in Table 3-1, *Proposed 2040 Buildout Projections in the EIR Study Area*.

**TABLE 3-1 PROPOSED GENERAL PLAN 2040 BUILDOUT PROJECTIONS IN THE EIR STUDY AREA**

Category	Existing Conditions (2019)	Projected Net Change by Area (2019-2040)		Total Net Change (2019-2040)	Total Buildout (2040)
		City	Unincorporated		
Households	41,060	20,070	10	20,080	61,140
Housing Units	43,770	21,400	10	21,410	65,180
Total Population	108,020	51,990	30	52,020	160,040
Jobs	62,440	16,530	390	16,920	79,360

Source: PlaceWorks, 2022.

As shown in Table 3-1, the City expects approximately 16,920 net new jobs in the EIR Study Area by 2040, which correlates to approximately 4,325,000 square feet of net new non-residential development. The buildout projections in Table 3-1 include growth associated with current development projects, development of the sites in the City's 2023-2031 Housing Element Sites Inventory, and development of ADUs and units under Senate Bill 9 as allowed under State housing law.<sup>6</sup> Specific development projects known at the time of preparation of the buildout numbers are listed in Appendix B, *Projects Included in Buildout Projections*, of this Draft EIR, and account for 6,132 units, or 29 percent of the 21,410 housing units in Table 3-1. The City has identified sites to accommodate an additional 2,020 units to meet the City's Regional Housing Needs Allocation of 7,015 units by January 2031.

Development within the city would largely be focused within the ten General Plan Land Use Study Areas. Of the 21,410 new housing units projected to be built by 2040, approximately 19,700 (92 percent) are expected to be located within the General Plan Land Use Study Areas, and of the 16,920 new jobs, approximately 15,020 (89 percent) are expected to be in the General Plan Land Use Study Areas. While the ten General Plan Land Use Study Areas are the locations where the most growth is projected to occur, changes would still occur outside of these areas, as the General Plan would continue to allow for growth outside of the General Plan Land Use Study Areas based on allowed densities, regulations, and State law.

### 3.7 INTENDED USES OF THIS EIR

This Draft EIR is intended to review potential environmental impacts associated with the adoption and implementation of the proposed project and determine corresponding mitigation measures, as necessary. This Draft EIR is a program-level EIR and does not evaluate the impacts of specific, individual

<sup>6</sup> Senate Bill 9 (Chapter 162, Statutes of 2021) requires ministerial approval for housing developments with no more than two primary units in a single-family zone, and the subdivision of parcels in a single-family zone into two parcels.

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developments that may be allowed in the future under the proposed project. Each future project will conduct additional environmental review, as required by CEQA, to secure any necessary discretionary development permits. As part of this process, subsequent projects will be reviewed by the City for consistency with the General Plan and this Draft EIR.

Projects successive to this Draft EIR include, but are not limited to, the following:

- Approval and funding of major public projects and capital improvements.
- Issuance of permits and other approvals necessary for implementation of the proposed project.
- Property rezoning consistent with the proposed General Plan 2040.
- Development plan approvals, such as tentative maps, variances, conditional use permits, planned developments, and other land use permits.
- Permit issuances and other approvals necessary for public and private development projects.
- Development agreement processes and approvals.

The 2040 population and employment forecasts in this Draft EIR will serve as parameters for environmental analysis for future development projects within San Mateo. In the event that proposed development in the city would exceed the buildout projections used in this Draft EIR, the City would require environmental review for any subsequent development to address growth impacts that would occur as a result of development exceeding the General Plan projections and related Draft EIR assumptions. This does not preclude the City, as lead agency, from determining that an EIR would be required for any development under the relevant provisions of CEQA (e.g., Section 21166 and related guidelines).

### 3.8 REQUIRED PERMITS AND APPROVALS

The proposed project would require adoption by the San Mateo City Council. The Planning Commission and other decision-making bodies will review the proposed project and make recommendations to the City Council. While other agencies may be consulted during the General Plan 2040 process, their approval is not required for General Plan 2040 adoption. However, subsequent development under the General Plan 2040 may require approval of State, federal, responsible, and trustee agencies that may rely on the programmatic EIR for decisions in their areas of permitting.

## PROJECT DESCRIPTION

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## 4. *Environmental Analysis*

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This chapter describes the organization of the environmental analysis section of this Draft Environmental Impact Report (EIR) and the assumptions and methodology of the impact analysis and the cumulative impact setting.

### CHAPTER ORGANIZATION

This chapter of the Draft EIR is made up of 18 subchapters that evaluate the direct, indirect, and cumulative environmental impacts of the proposed project. In accordance with Appendix F, Energy Conservation, and Appendix G, Environmental Checklist, of the CEQA Guidelines, the potential environmental effects of the proposed project are analyzed for potential significant impacts in the following 18 environmental issue areas, which are organized with the listed abbreviations:

4.1 Aesthetics (AES)	4.10 Land Use and Planning (LU)
4.2 Air Quality (AQ)	4.11 Noise (NOISE)
4.3 Biological Resources (BIO)	4.12 Parks and Recreation (REC)
4.4 Cultural Resources (CULT)	4.13 Population and Housing (POP)
4.5 Energy (ENE)	4.14 Public Services (PS)
4.6 Geology and Soils (GEO)	4.15 Transportation (TRAN)
4.7 Greenhouse Gas Emissions (GHG)	4.16 Tribal Cultural Resources (TCR)
4.8 Hazards and Hazardous Materials (HAZ)	4.17 Utilities and Service Systems (UTIL)
4.9 Hydrology and Water Quality (HYD)	4.18 Wildfire (WILD)

Each subchapter is organized into the following sections:

- **Environmental Setting** offers a description of the existing environmental conditions, providing a baseline against which the impacts of the proposed project can be compared, and an overview of federal, State, regional, and local laws and regulations relevant to each environmental issue.
- **Standards of Significance** refer to the quantitative or qualitative standards, performance levels, or criteria used to evaluate the existing setting with and without the proposed project to determine whether the impact is significant. These thresholds are based primarily on the CEQA Guidelines, and also may reflect established health standards, ecological tolerance standards, public service capacity standards, or guidelines established by agencies or experts.
- **Impact Discussion** gives an overview of the potential impacts of the proposed project and explains why impacts are found to be significant or less than significant prior to mitigation. This subsection also includes a discussion of cumulative impacts related to the proposed project. Impacts and mitigation measures are numbered consecutively within each topical analysis and begin with an acronym or abbreviated reference to the impact section.

## ENVIRONMENTAL ANALYSIS

### STANDARDS OF SIGNIFICANCE

As stated above, significance criteria are identified before the impact discussion subsection, under the subsection, “Standards of Significance.” For each impact identified, a level of significance is determined using the following classifications:

- **No Impact.** A no impact conclusion describes circumstances where there is no adverse effect on the environment.
- **Less Than Significant (LTS).** A less-than-significant impact includes effects that are noticeable, but do not exceed established or defined thresholds, or can be mitigated below such thresholds.
- **Significant (S).** A significant impact includes a description of the circumstances where an established or defined threshold would be exceeded. For each impact identified as being significant, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If one or more mitigation measure(s) would reduce the impact to a less-than-significant level successfully, this is stated in the EIR.
- **Significant and Unavoidable (SU).** Significant and unavoidable impacts are described where mitigation measures would not diminish these effects to less-than-significant levels. The identification of a program-level significant and unavoidable impact does not preclude the finding of less-than-significant impacts for subsequent projects that comply with the applicable regulations and meet applicable thresholds of significance.

### EVALUATION METHODOLOGY

Under CEQA, the decision as to whether an environmental effect should be considered significant is reserved at the discretion of the City of San Mateo, acting as the lead agency, based on substantial evidence in the record as a whole, including views held by members of the public. An ironclad definition of “significant effect” is not always possible because the significance of an activity may vary based on the setting. The analysis in the Draft EIR is based on scientific and factual data that has been reviewed by the lead agency and represents the lead agency’s independent judgment and conclusions.<sup>1</sup> This section describes the methodology for the program-level evaluation in Chapters 4.1 through 4.18.

### GENERAL PLAN 2040 HORIZON DEVELOPMENT POTENTIAL

As discussed in Chapter 3, *Project Description*, of the Draft EIR, the proposed project includes two long-range planning documents: 1) General Plan 2040 and 2) Climate Action Plan (CAP) update. The environmental analysis in this EIR discusses the potential for adverse impacts to occur from increasing the buildout potential in the EIR Study Area; General Plan land use designation changes; new and modified General Plan goals, policies, and actions; and adoption and implementation of the proposed CAP update.

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<sup>1</sup> California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15064(b).

## ENVIRONMENTAL ANALYSIS

The 2040 horizon development potential under the proposed project includes growth associated with current development projects, development of the sites in the City's 2023-2031 Housing Element Sites Inventory, development of ADUs and units under Senate Bill 9, and redevelopment focused within the ten General Plan Land Use Study Areas, plus the development potential for the remainder of the city where land use designation changes are not proposed as part of the project. As shown in Table 3-1, *Proposed General Plan 2040 Buildout Projections in the EIR Study Area*, in Chapter 3 of this Draft EIR, this combined projected new growth in the entire EIR Study Area for the 2040 horizon year includes 20,080 new households, 21,410 new residential units, 52,020 new residents, and 16,920 new employees by 2040. Of this growth, approximately 90 percent of new housing and jobs are expected to occur within the ten General Plan Land Use Study Areas.

Because the proposed project consists of two long-term policy documents that are intended to guide future development activities and City actions, and because no specific development projects are proposed as part of the project, it is reasonable to assume that future development would occur incrementally or gradually over the approximately 20-year buildout horizon (i.e., 2020 to 2040). However, while this assumption describes the long-range nature of the proposed project, it does not prohibit or restrict when development can occur over the horizon period.

## EVALUATION OF THE GENERAL PLAN AND ITS HORIZON-YEAR PROJECTIONS

All of the analyses in this EIR are based on a consistent interpretation of the proposed General Plan land use map and policies and the type and amount of growth that the General Plan would allow. However, the various analyses in this EIR require two different types of data inputs: some analyses require spatial inputs only and some require both quantitative and spatial inputs. In each case, the required analysis is determined by the standard of significance used for the impact discussion.

- Analyses that require a quantitative estimate of growth include vehicle trip generation, air pollution emissions, greenhouse gas emissions, noise generation, population growth, impacts on public services and utilities, and recreation. Impacts in these areas are generated by an increase in the number of people living and working in San Mateo, which generates consequent increases in vehicle miles traveled, noise, emissions, and use of services. Therefore, a reliable analysis depends on a reasonable, quantitative estimate of new population and employment. For these analyses, the horizon-year projection was considered "reasonably foreseeable" and was used in the analysis.
- Analyses that are based on spatial location only include aesthetics, biological resources, cultural resources, geology, hazards and safety, hydrology and water quality, land use, tribal cultural resources, and wildfire. These analyses must consider whether the proposed General Plan would allow *any* development in a geographic area, such as a very high fire hazard severity zone, which could create potential impacts. For these analyses, the question is not necessarily *how much* development the General Plan would allow, but *where* that development could potentially be located. Therefore, all potential development allowed by the land use map of the proposed General Plan was evaluated to assess impacts in these topics.

## ENVIRONMENTAL ANALYSIS

### BASELINE

As discussed in Chapter 3, *Project Description*, of this Draft EIR, although many of the goals and policies, of the existing General Plan are being carried forward into the proposed project, this EIR does not evaluate the proposed project compared to the full potential buildout allowed by the existing General Plan, but rather evaluates the impacts of the proposed project compared to existing conditions, as required by CEQA Guidelines Section 15126.2. Generally, baseline represents the existing conditions on the ground (“physical conditions”). However, for quantitative analyses reliant on existing demographic or development data, a baseline year of 2019 is used, as it was the last full year of data before the pandemic, which disrupted many areas of data collection.

Baseline population, housing, and employment data from 2019 is shown in Table 4-1, *Existing Baseline Conditions*.

**TABLE 4-1 EXISTING BASELINE CONDITIONS (2019)**

Category	City Limits	Unincorporated	Total EIR Study Area
Households	39,770	1,290	41,060
Housing Units	42,400	1,370	43,770
Total Population	104,600	3,420	108,020
Jobs	61,230	1,210	62,440

Note: As described in Chapter 3, *Project Description*, of this Draft EIR, the EIR Study Area includes City Limits and the Sphere of Influence. The EIR Study Area is shown on Figure 3-2, *EIR Study Area*.

Source: PlaceWorks, 2022.

### GENERAL PLAN 2040 GOALS, POLICIES, AND ACTIONS

The proposed goals, policies, and actions in General Plan 2040 aim to reduce vehicle miles traveled, greenhouse gas emissions, air and water pollutants, energy consumption, water demand, and solid waste generation by promoting infill development; increase opportunities for alternative modes of transportation, connectivity, and pedestrian and bicycle access; support local job growth; protect open space; conserve natural resources; and minimize the risks to existing and future development from environmental hazards. In addition, General Plan policies aim to protect cultural resources, including historic buildings, and ensure new development and redevelopment is compatible with neighboring land uses.

Substantive General Plan goal, policy, and action changes include addition, removal, or functional (i.e., not purely semantic) revisions in ways that have the potential to result in a physical impact on the environment. Nonsubstantive changes include the renumbering of policies or minor text revisions, which do not have the potential to result in a physical change to the environment.

Discussions of how substantive changes to the General Plan may result in adverse physical changes are included in the analyses under each impact criterion in the impact discussions in Chapters 4.1 through 4.18 of the Draft EIR. The proposed goals, policies, and programs have been carefully reviewed for their adequacy in reducing and/or avoiding impacts to the environment that could occur from future

## ENVIRONMENTAL ANALYSIS

development in the city. The proposed General Plan goals, policies, and actions are listed in the impact discussions of Chapters 4.1 through 4.18 to illustrate where they would reduce impacts from potential future development in San Mateo. Therefore, impact discussions for the effects of the proposed project necessarily encompass analysis of the effects of these policies as a whole, and policies with relevance to CEQA topics are discussed in the appropriate chapters.

In some cases, activities implemented in adherence to General Plan goals, policies, and actions may involve physical effects that would have the potential to create or contribute to an impact on the environment. For example, General Plan policies call for the creation and maintenance of bicycle and pedestrian networks and facilities; installation and use of natural features for sea level rise protection; upgrades and maintenance of public infrastructure, buildings, and facilities; and the continuation of City services. These activities could involve water and energy consumption, generate noise, and/or create air emissions from construction vehicles and equipment. The physical effects associated with these activities would generally be nominal when compared to the overall effects of the construction and operation of future development projects under the proposed General Plan. In addition, these activities, while promoted by the proposed General Plan would occur subject to other requirements such as permitting requirements and potential project-level environmental review. Some of these activities (such as routine maintenance of public infrastructure) would occur with or without the proposed General Plan, and any potential physical impacts associated with such activities would be independent actions not occurring as a result of the proposed General Plan.

## CLIMATE ACTION PLAN UPDATE

As described in Chapter 3, *Project Description*, the proposed CAP update does not include any substantive updates to the strategies in the City's 2020 CAP. The proposed CAP update includes:

- Revisions to previous inventory years including the 2005 baseline.
- An updated GHG emissions inventory for the year of 2019.
- A revised forecast year of 2030, consistent with the CAP adopted in 2020.
- A new forecast year of 2040, consistent with the buildout year for the proposed General Plan development projections evaluated in this EIR.
- A new forecast for 2045, consistent with the State's new GHG reduction goal per AB 1279.
- Updated GHG reduction targets and reduction measure quantification to align with the updated forecast years.

Where relevant, Chapters 4.1 through 4.18 identify CAP strategies relevant to CEQA standards of significance and discuss their effect in avoiding or reducing impacts to the environment from the construction and operation of future development under the proposed General Plan and CAP update. In general, CAP strategies aim to reduce energy consumption, greenhouse gas emissions, water demand, and solid waste generation; require adherence to green building practices; increase opportunities for alternative modes of transportation, promote pedestrian and bicycle access, improve transportation safety and connectivity; promote tree planting; and promote composting, expand recycling, increase waste diversion, and greywater use. The combined effect of implementation of the CAP strategies would be to reduce environmental effects as demonstrated by the proposed CAP update and as discussed in detail in Chapters 4.5, *Energy*, and Chapter 4.7, *Greenhouse Gas Emissions*.



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The proposed updates to the previous inventory years, the 2019 baseline, the new forecast years, and the updated GHG reduction targets and reduction measure quantification would not result in physical changes in San Mateo and would not have any impacts on the physical environment.

## PRIORITY DEVELOPMENT AREAS AND TRANSIT PRIORITY AREAS

The Metropolitan Transportation Commission's and Association of Bay Area Governments' (ABAG) *Plan Bay Area* is the San Francisco Bay Area's Regional Transportation Plan/Sustainable Community Strategy. *Plan Bay Area* is the long-range integrated transportation and land use/housing strategy through 2050 for the Bay Area, pursuant to Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act. *Plan Bay Area* lays out a development scenario for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas (GHG) emissions from transportation vehicle miles traveled (VMT) (excluding goods movement) beyond the per capita reduction targets identified by the California Air Resources Board. *Plan Bay Area 2050* extends the planning horizon and builds on the robust framework of *Plan Bay Area* 2040.

### PRIORITY DEVELOPMENT AREAS

A PDA is a place that has convenient public transit service, often referred to as "transit-oriented," that is prioritized by local governments, such as San Mateo, for housing, jobs, and services within existing communities. All PDAs are created and planned by local governments, which nominate eligible areas to ABAG for adoption. The PDAs identified throughout the Bay Area in *Plan Bay Area* 2050 were projected to accommodate 72 percent (or 985,000 units) of new housing and 48 percent (or 679,000) of new jobs in the region from the 2015 baseline.<sup>2</sup> Development in PDAs leverage existing infrastructure and therefore can minimize development in green field (undeveloped) areas and maximize growth in transit-rich communities to help lower VMT and consequently reduce GHG emissions, air quality pollutants, and noise from vehicles with internal combustion engines dependent on fossil fuels. Additionally, due to the location, infill development in PDAs result in fewer impacts related to agricultural, forestry, mineral, archaeological, and biological resources, energy, geology and soils, hydrology and water quality, and wildfire. Impacts related to concentrated development in the PDAs is discussed throughout this Draft EIR, and specific quantified impacts are described in Chapter 4.2, *Air Quality*, Chapter 4.7, *Greenhouse Gas Emissions*, and Chapter 4.15, *Transportation*, of this Draft EIR.

Certain potential future residential or mixed-use residential projects and projects in PDAs that meet defined criteria in the CEQA Guidelines may be eligible for CEQA streamlining. For example, while not exclusive to PDAs, due to their urban setting, development in a PDA is more likely to qualify for a CEQA Guidelines Section 15332, Infill Development Projects, Class 32 Categorical Exemption.

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<sup>2</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed on August 9, 2022.

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### TRANSIT PRIORITY AREAS

*Plan Bay Area 2050* also identifies TPAs, referred to as Transit-Rich PDAs.<sup>3</sup> These are areas within 0.5 miles of a major transit stop (i.e., a stop with service frequency of 15 minutes or less) that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon of a Transportation Improvement Program adopted pursuant to Section 450.216 or Section 450.322 of Title 23 of the Code of Federal Regulations. TPAs generally include existing neighborhoods served by transit and contain a wide range of housing options along with jobs, schools, and amenities. Certain potential future residential or mixed-use residential projects and projects<sup>4</sup> in TPAs that meet defined criteria in the CEQA Guidelines may be eligible for CEQA streamlining.

With respect to potential future development in a TPA, Senate Bill (SB) 743, which became effective on January 1, 2014, amended CEQA by adding Public Resources Code Section 21099 regarding analysis of transportation, aesthetics, and parking impacts for urban infill projects, among other provisions.

SB 743 required the Governor's Office of Planning and Research to identify new metrics for identifying and mitigating transportation impacts under CEQA, shifting from a congestion-based (level of service or LOS) standard to a VMT standard. Transportation impacts are discussed in Chapter 4.15, *Transportation*, of this Draft EIR.

With respect to aesthetics and parking, CEQA Section 21099(d)(1), states, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a TPA shall not be considered significant impacts on the environment." Accordingly, these topics are no longer to be considered in determining significant environmental effects for projects that meet all three of the following criteria:

- Is located on an infill site which is defined as "a lot located within an urban area that has been previously developed or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses."
- Is a residential, mixed-use residential, or an employment-center project.
- Is in a transit priority area, as defined above.

Accordingly, in compliance with SB 743, no significant aesthetic or parking impacts can be made in this environmental analysis for potential future development in the TPA surrounding El Camino Real, as shown on Figure 4-1. Aesthetic and parking impacts are not discussed further in this EIR with respect to potential future development in these designated TPAs. As appropriate, aesthetic impacts are considered for potential future development outside of these areas.

<sup>3</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, *Plan Bay Area 2050: Regional Growth Framework Update – Overview of Existing and Updated Geographies*, [https://www.planbayarea.org/sites/default/files/pdfs\\_referenced/2019\\_Regional\\_Growth\\_Framework\\_Update\\_-\\_Whats\\_Changed\\_1.pdf](https://www.planbayarea.org/sites/default/files/pdfs_referenced/2019_Regional_Growth_Framework_Update_-_Whats_Changed_1.pdf), accessed August 9, 2022.

<sup>4</sup> A project in a transit priority area is referred to as a transit priority project sometimes referred to as a TPP development.

## ENVIRONMENTAL ANALYSIS

As part of its implementing framework, *Plan Bay Area* identifies Priority Development Areas (PDA) and Transit Priority Areas (TPA) as areas where concentrated development can have beneficial environmental effects and reduce adverse environmental impacts. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas, Plan Bay Area 2050* identifies the following four PDAs and TPA within the EIR Study Area:

- **Grand Boulevard Initiative PDA.** This is the most expansive PDA in San Mateo, reaching from the northwestern boundary of the City to the southeastern boundary. This PDA includes portions of the Northwest Heights, Hayward Park, Beresford Park, Sugarloaf, and Hillsdale neighborhoods. As shown on Figure 4-1, this PDA shares a border with the other three PDAs in the City.
- **Downtown PDA.** This PDA encompasses downtown San Mateo. As shown on Figure 4-1, this PDA shares a border with the Grand Boulevard Initiative PDA.
- **Rail Corridor PDA.** As shown on Figure 4-1, the Rail Corridor PDA. This PDA includes portions of the Hayward Park and Hillsdale neighborhoods and shares a border with the Grand Boulevard Initiative PDA and the El Camino Real PDA.
- **El Camino Real PDA.** This PDA extends from the interchange of State Route (SR-) 82 and SR-92 to the southeastern border of San Mateo. This PDA includes portions of the Beresford Park, Hillsdale, and Sugarloaf neighborhoods. As shown on Figure 4-1, this PDA shares a border with the Grand Boulevard Initiative PDA and the Rail Corridor PDA.
- **TPA.** A TPA is defined as an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan. *Plan Bay Area* identifies El Camino Real as part of a transportation project (RTP ID: 21-T10-078) to implement Bus Rapid Transit improvements to existing bus service.<sup>5</sup> As shown in Figure 4-1, the TPA surrounds El Camino Real (SR-82), extending from the northwestern boundary of the City to the southeastern boundary, as well as the three Caltrain stations in San Mateo.

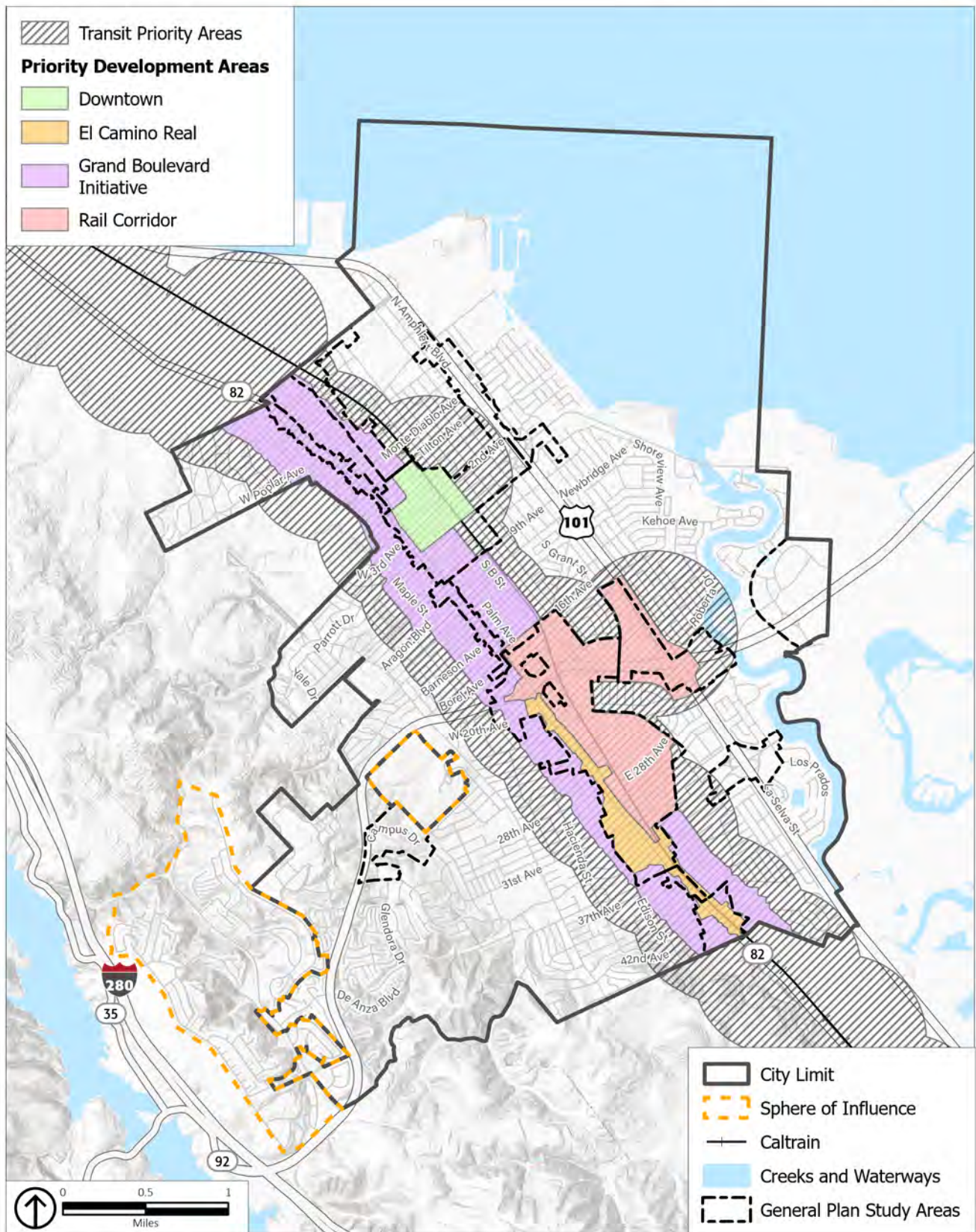
## PARKING

Effective in 2010, parking inadequacy as a significant environmental impact was eliminated from the CEQA Guidelines by The Governor's Office of Planning and Research, which is the entity charged with drafting guidelines to help agencies implement CEQA. Accordingly, parking adequacy in the EIR Study Area is not discussed further in this EIR.

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<sup>5</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, 2023, Plan Bay Area 2050 Transportation Project List, <https://www.planbayarea.org/2050-plan/final-plan-bay-area-2050/final-supplemental-reports/interactive-transportation-project-list>, accessed May 30, 2023.

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Source: City of San Mateo, 2022; ABAG/MTC, 2023; PlaceWorks, 2023.

Figure 4-1  
Priority Development Areas and Transit Priority Areas

## ENVIRONMENTAL ANALYSIS

### POTENTIAL EFFECTS OF THE PROJECT ON THE ENVIRONMENT

The California Supreme Court concluded in the *California Building Industry Association vs. Bay Area Air Quality Management District* (CBIA vs. BAAQMD) case that “CEQA generally does not require an analysis of how existing environmental conditions will impact a project’s future users or residents.” The CBIA vs. BAAQMD ruling provided for several exceptions to the general rule where an analysis of the project on the environment is warranted: 1) if the project would exacerbate existing environmental hazards (such as exposing hazardous waste that is currently buried); 2) if the project qualifies for certain specific specified exemptions (certain housing projects and transportation priority projects per Public Resource Code (PRC) 21159.21 (f),(h); 21159.22 (a),(b)(3); 21159.23 (a)(2)(A); 21159.24 (a)(1),(3); or 21155.1 (a)(4),(6)); 3) if the project is exposed to potential noise and safety impacts on projects due to proximity to an airport (per PRC 21096); and 4) school projects require specific assessment of certain environmental hazards (per PRC 21151.8). Therefore, the evaluation of the significance of project impacts under CEQA focuses on the potential impacts of the proposed project on the environment, including whether the proposed project may exacerbate any existing environmental hazards. Existing environmental hazards in San Mateo include, but are not limited to, seismic hazards, sea level rise, and wildfire. While the effects of these hazards on the proposed project are not subject to CEQA review following the *CBIA* case,<sup>6</sup> the City recognizes that seismic, wildfire, and flooding hazards from sea level rise are issues of local issues of concern. Therefore, a discussion of the project’s potential to exacerbate these hazardous conditions is provided in Chapter 4.6, *Geology and Soils*, Chapter 4.8, *Hazards and Hazardous Materials*, Chapter 4.9, *Hydrology and Water Quality*, and Chapter 4.18, *Wildfire*, of this Draft EIR.

### CUMULATIVE IMPACT ANALYSIS

A cumulative impact consists of an impact created as a result of the combination of the project evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project’s incremental effect is “cumulatively considerable.” Used in this context, cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. In the case of a long-range plan such as the General Plan, cumulative effects occur when future development under the long-range plan is combined with development in the surrounding areas, or in some instances, in the entire region.

Where the incremental effect of a project is not “cumulatively considerable,” a lead agency need not consider that effect significant but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. The CEQA Guidelines state that a lead agency has discretion to determine if a project’s contribution to a significant cumulative impact is cumulatively considerable.

The cumulative discussions in Chapters 4.1 through 4.18 of this Draft EIR explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is

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<sup>6</sup> *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369.



## ENVIRONMENTAL ANALYSIS

being analyzed. For example, in assessing macro-scale air quality impacts, all development within the air basin contributes to regional emissions of criteria pollutants, and basinwide projections of emissions are the best tool for determining the cumulative impact. In assessing aesthetic impacts, on the other hand, only development within the local area of change would contribute to a cumulative visual effect since the area of change is only visible in its vicinity.

CEQA Guidelines Section 15130 permits two different methodologies for the cumulative impact analysis:

- The “list” approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the city.
- The “projections” approach allows the use of a summary of projections in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

The cumulative impact analysis in this Draft EIR relies on a projections approach and takes into account growth from the proposed project within the EIR Study in combination with impacts from projected growth in the rest of San Mateo County and the surrounding region, as forecast by *Plan Bay Area 2050*. The following provides a summary of the cumulative impact setting for each impact area:

- **Aesthetics:** The cumulative setting for visual impacts includes the growth within the EIR Study Area in combination with projected growth in the rest of San Mateo County and the surrounding region. The cumulative setting for visual impacts also includes potential future development under the proposed project, combined with effects of development on lands adjacent to the EIR Study Area
- **Air Quality:** Cumulative air quality impacts could occur from a combination of the proposed project with regional growth within the San Francisco Bay Area Air Basin.
- **Biological Resources:** The geographic scope of the cumulative analysis for biological resources considers the surrounding incorporated and unincorporated lands and the region.
- **Cultural Resources:** Cumulative impacts to cultural resources could occur from projected growth and intensified development in the surrounding region.
- **Energy:** Cumulative impacts to energy resources could occur if a series of actions lead to a wasteful, inefficient, or unnecessary consumption of energy resources or a conflict with or obstruction of a State or local plan for renewable energy and energy efficiency.
- **Geology and Soils:** The cumulative setting for this analysis includes growth within the EIR Study Area in combination with projected growth in the rest of San Mateo County and the surrounding region.
- **Greenhouse Gas Emissions:** The cumulative impact analyses for GHG emissions are related to the entire region. Because GHG emissions are not confined to a particular air basin but are dispersed worldwide, the cumulative impact analysis focuses on the global impacts and thus, is by its nature cumulative.
- **Hazards and Hazardous Materials:** The area considered for cumulative impacts is San Mateo County, which is the service area for the San Mateo County Environmental Health Division, the affected Certified Unified Program Agency.

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- **Hydrology and Water Quality:** The geographic context used for the cumulative assessment of hydrology and water quality impacts, including the potential to exacerbate the potential for flooding, considers the watersheds that encompass San Mateo.
- **Land Use and Planning:** The geographic context for the cumulative land use and planning effects considers impacts from future development under the proposed project combined with impacts of development on lands adjacent to the city.
- **Noise:** Cumulative construction impacts are considered in the context of development that could occur with implementation of the proposed project and cumulative development within nearby areas of San Mateo County that could result in construction noise levels higher than those of development of under the proposed project alone at some receptor locations. Long-term stationary noise sources associated with the development and activities under the proposed project, combined with other cumulative projects make up cumulative stationary impacts. Cumulative operational noise impacts assesses whether future development under the proposed project, in conjunction with overall citywide growth and other cumulative projects, would significantly affect the roadway noise and, if so, whether the proposed project's contribution to the cumulative impact would be considerable.
- **Population and Housing:** Impacts from cumulative growth are considered in the context of potential future development under the proposed project combined with development on lands adjacent to the city.
- **Parks and Recreation:** Cumulative impacts are considered in the context of the growth from the proposed project combined with the estimated growth from reasonably foreseeable projects and their cumulative impacts regarding local parks and recreation in the service area of the San Carlos Parks and Recreation Department.
- **Public Services:** Cumulative impacts are considered in the context of projected growth from development under the proposed project within the city combined with the estimated growth in the service areas of each service provider.
- **Transportation:** The analysis of the proposed project addresses cumulative impacts to the transportation network in the context of the region.
- **Tribal Cultural Resources:** Cumulative impacts to tribal cultural resources could occur when a series of actions leads to adverse effects on local Native American tribes or tribal lands.
- **Utilities and Service Systems:** Cumulative impacts are considered in the context of the estimated growth in each utility's service area. Cumulative impacts to water, wastewater, solid waste, stormwater infrastructure, and energy infrastructure are individually analyzed.
- **Wildfire:** The analysis of the proposed project includes a discussion of how future development in the region may exacerbate wildfire risk in San Mateo and the surrounding area.

## 4.1 AESTHETICS

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential aesthetics impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP), and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.1.1 ENVIRONMENTAL SETTING

#### 4.1.1.1 REGULATORY FRAMEWORK

##### State Regulations

###### *California State Scenic Highways Program*

California's Scenic Highway Program was created by the State of California legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State laws governing the Scenic Highways Program are found in the Streets and Highways Code, Sections 260 through 263. The California Scenic Highway Program is maintained by the California Department of Transportation (Caltrans). Caltrans has not designated any highways within the City of San Mateo as a State Scenic Highway. However, to the west of the City Limits, Interstate 280 (I-280) is a Caltrans-designated State Scenic Highway, and State Route (SR-) 35 and SR-92 are eligible for designation.<sup>1</sup>

###### *California Building Code*

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations, commonly referred to as the California Building Code (CBC). The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The City of San Mateo regularly adopts each new CBC update under the San Mateo Municipal Code (SMMC) Chapter 23.08, *Building Code*. The CBC includes standards for outdoor lighting that are intended to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls.

The California Building Standards Commission adopted the California Green Building Standards Code, also known as CALGreen. As part of the CBC, CALGreen is in Part 11 of Title 24. CALGreen establishes building standards aimed at enhancing the design and construction of buildings using building concepts that reduce negative impacts and increase positive environmental impacts by encouraging sustainable

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<sup>1</sup> California Department of Transportation, 2018, California State Scenic Highway System Map, <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>, accessed August 3, 2022.

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construction practices. Specifically, Section 5.106.8, *Light Pollution Reduction*, establishes backlight, uplight, and glare ratings to minimize the effects of light pollution for nonresidential development. The local building permit process enforces the mandatory provisions of CALGreen. The City of San Mateo regularly adopts each new CALGreen update under the SMMC Chapter 23.70, *Green Building Code*.

### *Senate Bill 743*

As described in Chapter 4, *Environmental Analysis*, of this Draft EIR, Senate Bill (SB) 743, which became effective on January 1, 2014, amended the California Environmental Quality Act (CEQA) by adding California Public Resources Code Section 21099 regarding analysis of aesthetics impacts for urban infill projects, among other provisions. CEQA Section 21099(d)(1), states, “Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area (TPA) shall not be considered significant impacts on the environment.”

Accordingly, these topics are no longer to be considered in determining significant environmental effects for projects that meet all three of the following criteria:

- Is located on an infill site which is defined as “a lot located within an urban area that has been previously developed or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.”
- Is a residential, mixed-use residential, or an employment-center project.
- Is in a transit priority area, which is defined as “an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or Section 450.322 of Title 23 of the Code of Federal Regulations.”

As described in further detail in Chapter 4, *Environmental Analysis*, and Chapter 4.10, *Land Use and Planning*, of this Draft EIR, the EIR Study Area includes the TPA located along El Camino Real and surrounding the three Caltrain stations in San Mateo (San Mateo, Hayward Park, and Hillsdale). Accordingly, in compliance with SB 743, no significant aesthetic impact findings can be made in this environmental analysis for potential future development in the TPA.<sup>2</sup> Aesthetic impacts are not discussed further in this EIR with respect to potential future development in the TPA. As appropriate, aesthetic impacts are only considered for potential future development outside of these areas.

## Regional Regulations

### *Bay Conservation and Development Commission*

In 1969, the McAteer-Petris Act designated the Bay Conservation and Development Commission (BCDC) as the agency responsible for the protection of the San Francisco Bay and its natural resources. BCDC fulfills this mission through the implementation of the *San Francisco Bay Plan* (Bay Plan), an enforceable

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<sup>2</sup> Metropolitan Transportation Commission, 2021, Transit Priority Areas, <https://www.arcgis.com/apps/mapviewer/index.html?layers=370de9dc4d65402d992a769bf6ac8ef5>, accessed August 8, 2022.

plan that guides the future protection and use of San Francisco Bay and its shoreline.<sup>3</sup> The Bay Plan includes a range of policies on public access, water quality, project design, and dredging and fill. The Bay Plan also designates shoreline areas that should be reserved for water-related sports, industry, and public recreation; airports; and wildlife areas. The City of San Mateo is within BCDC's jurisdiction. Impacts related to biological resources, water quality, land use and planning, and recreation are discussed in Chapter 4.3, *Biological Resources*, Chapter 4.9, *Hydrology and Water Quality*, Chapter 4.10, *Land Use and Planning*, and Chapter 4.12, *Parks and Recreation*, of this Draft EIR, respectively.

BCDC has jurisdiction within 100 feet of the San Francisco Bay's shoreline, and proposed development in its jurisdiction is subject to BCDC *Public Access Design Guidelines*, which is intended to ensure that maximum feasible public access is provided.<sup>4</sup> BCDC defines "public access" to include physical public access to and along the shoreline of the San Francisco Bay and visual public access to the San Francisco Bay from other public spaces. Physical improvements, as defined by BCDC, may include waterfront promenades, trails, plazas, play areas, overlooks, parking spaces, landscaping, site furnishings, and connections from public streets to the water's edge.

### *County of San Mateo General Plan*

In 1986, the County of San Mateo adopted its general plan to guide decision-making for the unincorporated area of San Mateo. Policies that are most relevant to visual resources are primarily in Chapter 4, *Visual Quality*.

## Local Regulations

### *City of San Mateo Municipal Code*

The SMMC includes various directives pertaining to aesthetics. The SMMC is organized by title, chapter, and section and, in some cases, articles. Most provisions related to visual impacts are included in Title 13, *Parks and Recreation*, Title 23, *Building and Construction*, Title 25, *Signs*, and Title 27, *Zoning*.

- Chapter 13.40, *Protected Trees*, establishes regulations for the protection of trees within the city in order to preserve scenic beauty, among other reasons. A permit from the Director of Parks and Recreation is required to plant a street tree or to prune or remove a protected tree, unless associated with construction of an accessory dwelling unit. Any person who owns, controls, or possesses property within the city is required to use reasonable efforts to maintain and preserve all protected trees in a state of good health, structure, and form.
- Chapter 23.40, *Site Development Code*, was adopted to ensure the maximum preservation of natural scenic character of the City, ensure that development of each site relates to adjacent lands so as to maximize visually pleasant relationships, and preserve the natural settings of the hillsides. Unless

<sup>3</sup> San Francisco Bay Conservation and Development Commission, 2020, *San Francisco Bay Plan*, <https://bcdca.gov/pdf/bayplan/bayplan.pdf>, accessed August 31, 2022.

<sup>4</sup> San Francisco Bay Conservation and Development Commission, 2005, *Public Access Design Guidelines for the San Francisco Bay*, [https://bcdca.gov/planning/reports/ShorelineSpacesPublicAccessDesignGuidelinesForSFBay\\_Apr2005.pdf](https://bcdca.gov/planning/reports/ShorelineSpacesPublicAccessDesignGuidelinesForSFBay_Apr2005.pdf), accessed August 31, 2022.



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such work is exempted, any site development on slopes 15 percent or greater requires a site development planning application and a site development permit.

- Section 23.54.060, *Exterior Security Lighting*, regulates security lighting to limit both light spill beyond property lines and the light source viewable from off site. The lighting plan requires review by the Police Department and the Building Official.
- Title 25, *Signs*, provides standards for the regulation of signs in order to protect and enhance visual and aesthetic character of residential neighborhoods, business areas, and all zoning districts by prohibiting the visual clutter of obtrusive and incompatible signs. Section 25.06.050, *Signs Allowed*, illustrates the City's establishment of a sign program intended to create design standards and provisions to regulate signs used for larger complexes, commercial centers, or buildings with multiple tenants, to achieve aesthetic compatibility between all signs proposed in a project, and with signs on adjacent properties. These standards include design continuity that requires all signs be of a common design theme and placement and use common materials, colors, and illumination. Section 25.06.070, *Zoning Regulations Applicable to Signs on Private Property*, further restricts the type of signs that may be permitted. This section minimizes the allowance of signs illuminated by an artificial source so as to influence light and glare on adjacent properties. This section also outlines specific design criteria and restrictions for these signs, including an outline of which types of illuminated signs are prohibited within the city.
- Title 27, *Zoning*, includes the Zoning Ordinance which is the primary tool that shapes the form and character of physical development in San Mateo. The Zoning Ordinance contains all the Zoning Districts, and identifies land use standards, site development regulations, and other general provisions that ensure consistency between the General Plan and proposed development projects. Section 27.02.020, *Intent – Purpose*, states that the San Mateo Zoning Ordinance is, among other things, intended to protect the character and stability of residential, commercial, and manufacturing areas, and to provide for the elimination of incompatible and nonconforming uses of land, buildings, and structures that are adversely affecting the character and value of desirable development in each district. The Zoning Ordinance sets forth the development standards, including those related to visual resources, as follows.
  - Chapter 27.66, *Historic Preservation*, is relevant to the preservation of structures, sites, and areas of special character or special historical, architectural, or aesthetic interest or value that contribute to the visual setting in San Mateo. Among other requirements, this chapter requires the protection, enhancement, perpetuation, and use of structures, sites, and areas that are significant examples of architectural styles of the past or are landmarks in the history of architecture. The alteration of a structure on a landmark site or in a historic district may be subject to a certificate of appropriateness and review by the Planning Commission.
  - Chapter 27.71, *Landscape for Planning Applications*, requires landscaping to be a major component of all site design in order to create a city that has a strong landscaped character. Landscaping is to be installed and maintained to provide aesthetic quality while promoting building security. This chapter regulates plant coverage and tree sizes, as well as street trees, parking area, and right-of-way landscaping.
  - Chapter 27.83, *Slope and Hillside Development Standards*, applies to all lots and sites that have a footprint slope of 25 percent or greater. It is intended to establish regulations for managing the

development of hillside areas to ensure that future development displays sensitivity to the natural hillside setting and compatibility with nearby hillside neighborhoods.

### *San Mateo Design Guidelines*

The City has adopted several design guidelines for residential structures in the Downtown and Mid and South El Camino Real areas to ensure the design of new buildings and additions is compatible with their surroundings. Aspects of building design addressed by design guidelines include, but are not limited to, scale, building height, roof shapes, and lighting. As of publication of this Draft EIR, the City is in the process of developing Objective Design Standards for Multi-Family Projects that will regulate future development; this section covers the design guidelines that are currently adopted and in place.

The *Single-Family Dwelling Design Guidelines* require the construction of new single-family dwellings or the addition of a second story to a single-family dwelling to be compatible with the architectural character of the neighborhood.<sup>5</sup> The *Multi-Family Design Guidelines* were created to preserve San Mateo's neighborhood character and building scale while also considering the style and materials that will be used and the amount of parking, open space, and protection available for each multi-family unit.<sup>6</sup> The *Small Lot Multi Family Design Guidelines* apply to all multi-family zoned parcels that are less than 10,000 square feet and are proposed to have 3 or more dwelling units built on them.<sup>7</sup> These guidelines were set forth to retain and improve the visual quality of the San Mateo's multifamily neighborhoods and represent the minimum criteria for acceptable development. The *Duplex Design Guidelines* were created to address certain visual design issues concerning duplexes and two-family dwellings.<sup>8</sup>

The *Downtown Retail Core & Downtown Historic District Design Guidelines* apply to all property in the retail core of San Mateo including the historic district.<sup>9</sup> It outlines the minimum criteria for acceptable development and highlights visual aspects that should be preserved to retain the traditional small downtown character of San Mateo. The *Mid and South El Camino Real 40-55 Foot Building Height Design Criteria* set building heights in the Mid and South El Camino Real areas to encourage taller buildings that would be visually appealing and integrate well into the surrounding city fabric.<sup>10</sup> It also lays out the criteria for increased pedestrian and visual amenities within the Mid and South El Camino Real areas.

<sup>5</sup> City of San Mateo, 2006, *Single-Family Dwelling Design Guidelines*, <https://www.cityofsanmateo.org/DocumentCenter/View/1854/Single-Family-Dwelling-Design-Guidelines?bidId=>, accessed August 19, 2022.

<sup>6</sup> City of San Mateo, 1994, *Multi Family Design Guidelines*, <https://www.cityofsanmateo.org/DocumentCenter/View/2497/Multi-Family-Guidelines?bidId=>, accessed August 19, 2022.

<sup>7</sup> City of San Mateo, 1992, *Small Lot Multi Family (less than 10,000 square foot lot area) Design Guidelines*, <https://www.cityofsanmateo.org/DocumentCenter/View/2498/Small-Lot-Multi-Family-Design-Guidelines?bidId=>, accessed August 19, 2022.

<sup>8</sup> City of San Mateo, 2004, *Duplex Design Guidelines*, <https://www.cityofsanmateo.org/DocumentCenter/View/2481/Duplex-Design-Guidelines?bidId=>, accessed August 19, 2022.

<sup>9</sup> City of San Mateo, 1993, *Downtown Retail Core & Downtown Historic District Design Guidelines*, <https://www.cityofsanmateo.org/DocumentCenter/View/42557/Downtown-Retail-Core-and-Downtown-Historic-District-Design-Guidelines?bidId=>, accessed August 19, 2022.

<sup>10</sup> City of San Mateo, 2015, *Mid and South El Camino Real 40-55 Foot Building Height Design Criteria*, <https://www.cityofsanmateo.org/DocumentCenter/View/47529/ECR-Building-Height-Design-Criteria>, accessed August 19, 2022.

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The *Bay Meadows Phase II Design Guidelines and Development Standards* were developed for the construction of the Bay Meadows neighborhood in San Mateo.<sup>11</sup> These design guidelines were prepared to provide guidance and visual inspiration for the parts of the development that are seen and used by the public.

### *Street Lighting Standards*

The City of San Mateo Public Works Department's standard drawings for street light and electrical improvements provide standards for the installation of street lights. The standard mounting height for standard aluminum street lights on residential streets is 25 feet, and for collectors and arterials is 30 feet. The standards also include specifications for beautification street lamps.<sup>12</sup>

### *Other Plans*

#### San Mateo General Plan 2030

In 2010 the City of San Mateo adopted the General Plan 2030. The goals, policies, and actions that are relevant to visual resources are primarily in the Conservation, Open Space, Parks and Recreation Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.1.3, *Impact Discussion*.

#### Hillsdale Station Area Plan

The City of San Mateo adopted the *Hillsdale Station Area Plan* in April 2011 to provide the regulatory framework for compact and sustainable development in the area surrounding the Hillsdale Caltrain Station.<sup>13</sup> The Urban Design chapter establishes development guidelines and streetscape standards to promote vibrant attractive new development, streetscape improvements, and public gathering places.

#### Downtown Area Plan

In May 2009, the City of San Mateo approved the *Downtown Area Plan*.<sup>14</sup> The plan provides a framework for future decision making on private development projects. Concerning aesthetic qualities, it focuses on Central Park and maintaining visual continuity in neighborhoods and streetscapes.

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<sup>11</sup> City of San Mateo, December 12, 2006, *Bay Meadows Phase II Design Guidelines and Development Standards*, <https://www.cityofsanmateo.org/3250/Bay-Meadows-Phase-II-Design-Guidelines>, accessed July 12, 2023.

<sup>12</sup> City of San Mateo, <https://www.cityofsanmateo.org/DocumentCenter/View/1193/Street-Lighting-and-Electrical-?bidId=>, accessed July 13, 2023.

<sup>13</sup> City of San Mateo, April 18, 2011, *Hillsdale Station Area Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/59484>, accessed July 12, 2023.

<sup>14</sup> City of San Mateo, 2009, *Downtown Area Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/55327/2009-Downtown-Area-Plan?bidId=>, accessed August 19, 2022.

### San Mateo Rail Corridor Transit Oriented Development Plan

Adopted June 2005, the *San Mateo Rail Corridor Transit Oriented Development Plan* provides guidance for the creation of transit-oriented development within a half-mile radius of the Hillsdale and Hayward Park Caltrain station areas.<sup>15</sup> The Community Character and Design Guidelines chapter includes specific design guidance for neighborhoods, site planning, and building design to ensure that the vision for the plan area is realized through the creation of highly transit supportive, walkable, and attractive places and buildings to live, work, and visit.

### El Camino Real Master Plan

In 2001, the *El Camino Real Master Plan* was adopted by the San Mateo City Council.<sup>16</sup> The plan lays out the framework for development occurring at El Camino Real south, from SR-92 to the Belmont city border. Aesthetic values such as the use of landscape medians, street trees, light fixtures, and street furniture are discussed in the streetscape plan section. The design guidelines section lists aesthetic values to pursue, including well-sited buildings, visually interesting facades, more transparent storefront windows, increase building reveals, and vertical signage.

### Detroit Drive Specific Plan

Adopted in April 1984 and last amended in June 1990, the *Detroit Drive Specific Plan* outlines the framework for development in the Detroit Drive Area.<sup>17</sup> The plan discusses aesthetic urban design elements such as development characteristics, area patterns, and the pedestrian environment. The plan also outlines visual amenities required for every project design.

### Mariner's Island Specific Plan

The City adopted the *Mariner's Island Specific Plan* in June 1973 and last revised it in May 1995.<sup>18</sup> The plan provides developmental framework for Mariner's Island and has aesthetic design criteria related to design quality, landscaping, and signs.

<sup>15</sup> City of San Mateo, June 6, 2005, *San Mateo Rail Corridor Transit Oriented Development Plan*, <https://www.cityofsanmateo.org/1899/Rail-Corridor-Transit-Oriented-Developme>, accessed July 12, 2023.

<sup>16</sup> City of San Mateo, 2001, *El Camino Real Master Plan*, [cityofsanmateo.org/DocumentCenter/View/5111/0-Executive-Summary?bidId=](https://www.cityofsanmateo.org/DocumentCenter/View/5111/0-Executive-Summary?bidId=), accessed August 19, 2022.

<sup>17</sup> City of San Mateo, 1984, *Detroit Drive Specific Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/64607/Detroit-Drive-Specific-Plan---last-updated-1990#:~:text=The%20Detroit%20Drive%20Specific%20Plan,to%20insure%20compatibility%20of%20development.>, accessed August 19, 2022.

<sup>18</sup> City of San Mateo, 1995, *Mariner's Island Specific Plan*, [cityofsanmateo.org/DocumentCenter/View/64608/Mariners-Island-Specific-Plan-SCANNED](https://www.cityofsanmateo.org/DocumentCenter/View/64608/Mariners-Island-Specific-Plan-SCANNED), accessed August 19, 2022.

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### Shoreline Parks Specific Plan

The *Shoreline Park Specific Plan* was adopted in May 1971 and was last revised in July 1990.<sup>19</sup> It expands upon concepts in the general plan for the shoreline area of San Mateo and establishes architectural standards for visual quality. The plan focuses on the Shoreland, Seal Point, Seal Cove, Marina Lagoon and San Mateo Creek areas.

#### 4.1.1.2 EXISTING CONDITIONS

##### Visual Character

Key elements that contribute to the visual character of the EIR Study Area include ridgelines, hillsides, and the waters of the San Francisco Bay. San Mateo extends from the ridge of hills on the west to the waters of the San Francisco Bay on the east.

Several water features define the EIR Study Area, particularly along the eastern edge. San Mateo City Limits include roughly 1,200 acres of bay waters and some three miles of shoreline. The City and San Mateo County own most of the Bay frontage, with some properties held in private ownership. The 185-acre Marina Lagoon in northern San Mateo serves as flood control, recreation, and wildlife habitat, but it also has aesthetic value.

The aesthetic value of San Mateo's creeks as a natural feature varies, as many have been channelized, culverted, or subjected to development well within their riparian corridors. Highly visible above ground creeks are intermittent throughout the city and vary in aesthetic value, ranging from vegetated visible creeks to fully culverted or covered creeks. Examples of highly visible creeks include Borel Creek in the eastern part of the city and San Mateo Creek in the northern part of the city.

Sugarloaf Mountain is considered a key scenic resource, both for views of its hillsides from San Mateo, and for views over San Mateo, Foster City, and the Bay from its peak. The City's 37-acre Laurelwood Park is part of Sugarloaf Mountain and occupies the upper reaches and north side of Laurel Creek. Extensive woodlands in and around the College of San Mateo continue the open spaces of Hillsborough into the city.<sup>20</sup>

Within the City's Sphere of Influence (SOI), there are roughly 400 acres of open space, grasslands, and woodlands in the unincorporated Highlands area that contribute to the scenic value of the EIR Study Area. The SOI also includes the Peninsula Gold and Country Club, which offers views of the golf course and wildlife to residents who live nearby.

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<sup>19</sup> City of San Mateo, 1990, *Shoreline Park Specific Plan*, [cityofsanmateo.org/DocumentCenter/View/2486/Shoreline-Park-Specific-Plan?bidId=](http://cityofsanmateo.org/DocumentCenter/View/2486/Shoreline-Park-Specific-Plan?bidId=), accessed August 19, 2022.

<sup>20</sup> City of San Mateo, amended April 2011. *General Plan 2030, Conservation, Open Space, Parks and Recreation Element*.



## Scenic Views and Corridors

San Mateo is set between two dominant physical features: San Francisco Bay and the ridge of hills along the western edge of the city. The Bay and western hills are important natural views from many places in the city.

As shown in Figure 4.1-1, *Scenic Corridor Designated in San Mateo County General Plan*, San Mateo County's General Plan designates the area surrounding I-280 as a scenic corridor.<sup>21</sup> The scenic corridor area lies to the west of the San Mateo City Limits and is almost entirely outside of the EIR Study Area, with the exception of a sliver of the hillside area in the extreme southwestern corner of the San Mateo SOI, near the interchange of SR-92 and I-280.

## Scenic Highways

There are no officially designated State scenic highways within the EIR Study Area.<sup>22</sup> However, immediately west of the EIR Study Area is I-280, an officially designated State scenic highway.

## Light and Glare

Light pollution refers to all forms of unwanted light in the night sky around and above developed urban areas, including glare, light trespass, sky glow, and over lighting. Views of the night sky are an important part of the natural environment. Excessive light and glare can also be visually disruptive to humans and nocturnal animal species, and often reflects an unnecessarily high level of energy consumption. Light pollution has the potential to become an issue of increasing concern as new development contributes additional outdoor lighting installed for safety and other reasons.

The EIR Study Area includes several urbanized areas with a variety of residential, commercial, and public uses. Existing sources of light and glare in the EIR Study Area are similar to those that would be found in any urbanized area, and include streetlamps, parking lot lighting, storefront and signage lighting, car headlamps, and interior lighting visible through windows. Light pollution is primarily limited to urban areas of the EIR Study Area.

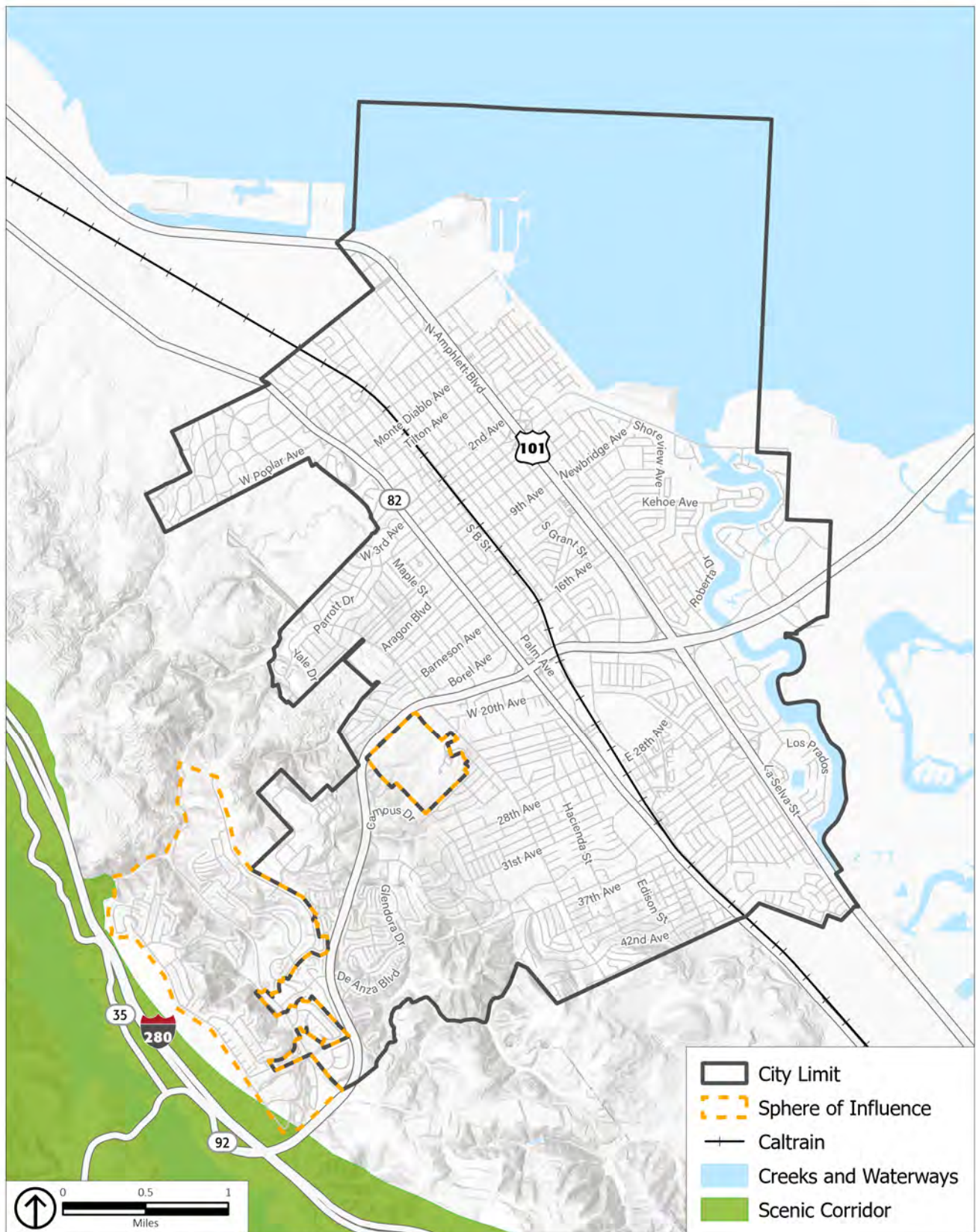
## Transit Priority Areas

As described in Section 4.1.1.1, *Regulatory Framework*, under subheading "Senate Bill 743," the TPA that includes a 0.5-mile buffer along El Camino Real and around the three Caltrain stations are areas where no significant aesthetic impact findings can be made in this or future environmental analysis, pursuant to SB 743.

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<sup>21</sup> County of San Mateo, November 1986, *General Plan*, <https://www.smcgov.org/media/101521/download?inline=>, accessed August 3, 2022.

<sup>22</sup> California Department of Transportation, 2018, California State Scenic Highway System Map, <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>, accessed August 3, 2022.



Source: County of San Mateo, 1986; PlaceWorks, 2023.

Figure 4.1-1  
Scenic Corridor Designated in the San Mateo County General Plan

## 4.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant aesthetics impact if it would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
5. In combination with past, present, and reasonably foreseeable projects, result in cumulative aesthetics impacts in the area.

With respect to standard number three, CEQA Section 21071, Urbanized Area Definition, has several metrics by which a city can be defined as an urban area. CEQA Section 21071(a)(1) states that a city can be classified as an urban area if the city has a population of at least 100,000 people. As shown in Table 3-1, *Proposed General Plan 2040 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR, the population of the EIR Study Area (including unincorporated areas in the Sphere of Influence) is 108,020. Therefore, San Mateo is considered an urban area under CEQA Guidelines Section 21071 and impact discussion AES-3 is based on the second half of the CEQA standard number three.

## 4.1.3 IMPACT DISCUSSION

As described in Section 4.1.1.1., *Regulatory Framework*, under subheading “Senate Bill 743,” potential future development in the TPA along El Camino Real and the three Caltrain stations in San Mateo would be exempt from aesthetics evaluation. As discussed in Chapter 3, *Project Description*, of this Draft EIR, potential future development under the proposed project is expected to largely occur in ten General Plan Land Use Study Areas that are near transit; contain aging shopping centers; or are areas where property owners have expressed interest in considering redevelopment of the property through the General Plan Update process. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4, *Environmental Analysis*, of this Draft EIR, much of the General Plan Land Use Study Areas are located within the TPA and are exempt from aesthetics evaluation. Accordingly, aesthetic impacts are only considered for potential future development outside of the TPA, including those in the Campus Drive and Bridgepoint Study Areas, as well as portions of the Peninsula Avenue, North Shoreview and Shoreview Study Area, and Hillsdale/Norfolk Study Areas.

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<b>AES-1</b>	<b>The proposed project would not have a substantial adverse effect on a scenic vista.</b>
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Future development under the proposed project would have the potential to affect scenic vistas and/or scenic corridors if new or intensified development blocked views of areas that provide or contribute to such visual resources. Potential effects could include blocking views of the San Francisco Bay and ridge of hills along the western border of the city from publicly accessible vantage points or the alteration of the overall scenic vista or I-280 corridor itself. Such alterations could be positive or negative, depending on the characteristics of individual future developments and the subjective perception of observers.

General Plan Land Use Study Areas outside of the TPA may offer or be part of intermittent or views of the Bay and hills. Potential future development outside of the TPA would be concentrated in existing urban areas on a limited number of vacant parcels and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, where future development would have a lesser impact on scenic vistas.

The Community Design and Historic Resources (CD) Element of the proposed General Plan includes goals, policies, and actions that require local planning and development decisions to consider impacts to scenic vistas and resources. The following General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts related to scenic vistas:

- **Goal CD-1:** Preserve and enhance San Mateo’s natural setting as an irreplaceable asset that is the physical foundation of the community.
  - **Policy CD 1.1: Respect for the Landscape.** Encourage new development to respect and respond to the natural topography of San Mateo.
  - **Policy CD 1.2: Preservation of Natural Views.** Preserve and enhance, to the extent feasible, publicly accessible views to the undeveloped foothills and the San Francisco Bay through the design of new development.
  - **Policy CD 1.3: Scenic Corridors.** Require new development adjacent to designated scenic corridors within San Mateo County’s General Plan to protect and enhance the visual character of these corridors.
- **Goal CD-2:** Minimize the impact of hillside development on the natural environment and public safety.
  - **Policy CD 2.1: Hillside Development Principles.** Require hillside development to minimize impacts by preserving the existing topography, limiting grading or cuts and fills, clustering development, and identifying opportunities for restoration or re-wilding. Limit development on steep hillsides with a 30 percent or higher slope.
  - **Policy CD 2.2: Minimal Impacts.** Require new development to preserve natural topographic forms and to minimize adverse impacts on vegetation, water, soil stability, and wildlife resources.
- **Goal CD-3:** Protect heritage trees, street trees, and tree stands and maintain the health and condition of San Mateo’s urban forest.

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- **Policy CD 3.1: Tree Preservation.** Continue to preserve heritage and street trees throughout San Mateo, where feasible.
- **Policy CD 3.2: Replacement Planting.** Require appropriate replacement planting or payment of an in-lieu fee when protected trees on public or private property are removed.
- **Policy CD 3.3: Tree Protection During Construction.** Require the protection of trees during construction activity; require that landscaping, buildings, and other improvements adjacent to trees be designed and maintained to be consistent with the continued health of the tree.
- **Policy CD 3.4: Public Awareness.** Pursue public awareness and education programs concerning the identification, care, and regulation of trees.
- **Goal CD-6:** Develop and maintain an attractive urban fabric that reflects San Mateo's unique visual and architectural character.
  - **Policy CD 6.1: Community Cohesion.** Design new private development, streets, and public spaces to enhance social connection by providing human-scale street-fronting uses and community spaces, as appropriate.
  - **Policy CD 6.2: Gateways.** Develop gateways that visually announce key entrances to San Mateo by maintaining or establishing distinctive architectural, art, or landscape features.
  - **Policy CD 6.3: Sustainable Design.** Encourage integration of sustainable design features and elements into the design of new buildings, including locating and orienting buildings to access solar exposure, preserving mature vegetation to the extent feasible, and using green building materials.
  - **Policy CD 6.4: El Camino Real (SR-82) Corridor.** Strive to make El Camino Real a destination, not just a corridor for people to pass through, by encouraging improvements to the public right-of-way and private properties along El Camino Real that will make the corridor safer and more attractive for all users. Examples of such improvements include redesigned transit stops, an improved pedestrian realm, and updated/improved building façades. Incorporate the Guiding Principles of the Grand Boulevard Initiative into future plans for the El Camino Real corridor in San Mateo.
  - **Policy CD 6.5: US Highway 101 Frontage.** Encourage upgrading of the appearance of US Highway 101 and properties adjacent to the freeway through design treatment, screening, and right-of-way landscaping.
  - **Policy CD 6.6: Signage.** Maintain signage controls that appropriately regulate the design, size, type, illumination, and quantity of signs visible from corridors and create consistent signage that reinforces San Mateo's unique identity.
  - **Policy CD 6.10: Nighttime Lighting.** Require nighttime lighting to be energy efficient, be designed to minimize light pollution and light spillage to adjacent properties, while protecting public safety.



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- **Goal CD-7:** Balance the growth and evolution of residential neighborhoods with the need to maintain and enhance their existing characteristics and physical qualities through the appropriate design of new development.
  - **Policy CD 7.1: Low-Density Residential Development.** Require new homes in the Low- and Very Low-Density residential designations, including single-family dwellings, duplexes, triplexes, four-plexes, and accessory dwelling units (ADUs) to be consistent with objective design standards as outlined in the City's Residential Design Standards.
  - **Policy CD 7.2: Single-Family Design.** Encourage single-family additions and new dwellings that address the preservation and enhancement of neighborhood visual and architectural character through context-sensitive building scale, materials, architectural style and details, and privacy.
  - **Policy CD 7.3: Multifamily Design.** Encourage architectural design of new multifamily developments that enhances a neighborhood's visual and architectural character by providing context-sensitive building and pedestrian-scale elements, high-quality materials and construction, open space, and resident amenities.
  - **Action CD 7.6: Objective Design Standards.** Develop and adopt objective design standards that clearly outline the City's design expectations for new single-family and multifamily projects.

All potential future development that is subject to discretionary approval within City Limits would be required to comply with SMMC regulations as described in Section 4.1.1.1, *Regulatory Framework*. The City has also adopted several design guidelines for residential structures and the Downtown, Mid, and South El Camino Real areas to ensure the design of new buildings and additions are compatible with their surroundings. Furthermore, potential future development in the city would be subject to the various planning documents that govern scenic quality in the city, as described in Section 4.1.1.1, *Regulatory Framework*. This includes the Hillsdale Station Area Plan, Downtown Area Plan, San Mateo Rail Corridor Transit Oriented Development Plan, El Camino Real Master Plan, Detroit Drive Specific Plan, Mariners Island Specific Plan, and the Shoreline Parks Specific Plan.

Any potential future development in the SOI would be required to comply with the San Mateo County General Plan and San Mateo County Zoning Ordinance.<sup>23</sup> Zoning designations in the SOI include Residential Estates, One Family Residential, and Resource Management districts.<sup>24</sup> Development in the Resource Management District would be required to adhere to San Mateo County Zoning Ordinance Section 6324.2, *Site Design Criteria*, to ensure compatibility with existing character and visual quality. Because the SOI does not have a Design Review district designation, design review is not required.

Compliance with SMMC regulations, San Mateo Design Guidelines, San Mateo County General Plan, and San Mateo County Zoning Ordinance, along with implementation of the proposed General Plan goals, policies, and actions, would ensure any impacts to scenic vistas and/or corridors would be less-than-significant.

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<sup>23</sup> County of San Mateo, Planning and Building Department, January 2022, *Zoning Regulations*, <https://www.smcgov.org/media/101461/download?inline=>, accessed May 19, 2023.

<sup>24</sup> County of San Mateo, 2023, Planning and Building Map Viewer, [https://gis.smcgov.org/Html5Viewer/Index.html?configBase=https://gis.smcgov.org/Geocortex/Essentials/REST/sites/publicplanning\\_sql/viewers/HTML52110/virtualdirectory/Resources/Config/Default](https://gis.smcgov.org/Html5Viewer/Index.html?configBase=https://gis.smcgov.org/Geocortex/Essentials/REST/sites/publicplanning_sql/viewers/HTML52110/virtualdirectory/Resources/Config/Default), accessed May 19, 2023.

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**Significance without Mitigation:** Less than significant.

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<b>AES-2</b>	<b>The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.</b>
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As described in Section 4.1.1.1, *Regulatory Framework*, there are no State-designated scenic highways within the EIR Study Area. However, I-280 is a state designated scenic highway and parts of the SOI are visible heading northbound. Land use changes in the unincorporated County that would affect I-280 views would be subject to the regulations of San Mateo County, including those in the San Mateo County General Plan and San Mateo County Zoning Ordinance, until the land is annexed to the City. Therefore, implementation of the proposed project would not damage existing scenic resources within a state scenic highway and a *less-than-significant* impact would occur.

**Significance without Mitigation:** Less than significant.

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<b>AES-3</b>	<b>The proposed project would not conflict with applicable zoning and other regulations governing scenic quality.</b>
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The proposed General Plan is the primary planning document for the City of San Mateo. The proposed update is intended to ensure consistency between the General Plan, land use changes, and State law. The proposed General Plan is the overriding planning document for the City, and it involves amending the General Plan 2030 and the land use designations to improve consistency, adoption and implementation for the proposed project. Due to the necessity of these documents to be consistent with each other, there would be no impact with respect to these documents being inconsistent with policies or regulations governing scenic quality.

In addition to the goals, policies, and programs listed in Impact Discussion AES-1, the Community Design and Historic Resources (CD) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider impacts that development could have on existing visual character. The following General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts on scenic quality:

- **Goal CD-8:** Improve the visual and architectural character, livability, and vitality of mixed-use and commercial areas.
  - **Policy CD 8.1: Objective Design Standards.** Provide clear, objective, and quantifiable design standards to guide new mixed-use and commercial development.
  - **Policy CD 8.2: Human-Scale Design.** Cultivate pedestrian activity in commercial and mixed-use areas by providing adequate sidewalk widths, activating ground-floor street façades with active uses, windows, plantings, and awnings, using high-quality construction materials, and including human-scale details and architectural features.
  - **Policy CD 8.3: Respect Existing Scale and Rhythm.** Encourage new mixed-use and commercial development to respect the scale and rhythm of surrounding buildings, including by providing

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breaks in the building face at spacings common to buildings in the area and by stepping back upper floors.

- **Action CD 8.6: Objective Design Standards.** Develop and adopt objective design standards for new mixed-use and commercial development to provide a clear understanding of the City's expectation for new project design, including pedestrian-friendly design.
- **Action CD 8.7: Commercial Development Adjacent to Residential.** Develop and adopt objective design standards that define and require appropriate design transitions from commercial to residential zones.

Furthermore, as described in impact discussion AES-1, all potential future development that is subject to discretionary approval within City Limits would be required to comply with SMMC regulations and the San Mateo design guidelines, as well as neighborhood-specific design guidelines and planning documents. Potential future development in the SOI would be subject to the regulations of the San Mateo County General Plan and San Mateo County Zoning Ordinance. While development resulting from implementation of the proposed project could potentially impact scenic quality in the EIR Study Area, development projects would be required to adhere to these regulations, along with the proposed General Plan goals, policies, and actions. Therefore, implementation of the proposed project would not conflict with applicable zoning or other regulations governing scenic quality and the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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AES-4	The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
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Nighttime illumination and glare impacts are the effects of a development's exterior lighting on adjoining uses and areas. Nighttime uses associated with potential future development may increase light intensity levels and may have the potential to affect existing and future nearby sensitive receptors. If lighting in new development is not designed to reduce upwardly directed light, nighttime lighting could obscure views of the night sky or intrude into neighboring properties. Potential future development would also incrementally increase glare due to the new building surfaces, parked cars, and solar panels if exterior glazing (i.e., windows and doors) and site planning (i.e., landscaping and solar panel placement) are not carefully considered. Light and glare impacts are determined through a comparison of the existing light sources with the lighting plans or policies incorporated in development proposals.

As discussed, potential future development is expected to largely occur within ten General Plan Land Use Study Areas, most of which are located within TPA. Future development in General Plan Land Use Study Areas within the TPA are exempt from aesthetics evaluation pursuant to SB 743. However, General Plan Land Use Study Areas outside of the TPA may offer intermittent or full views of the Bay and hills. Potential future development outside of the TPA would occur in existing urban areas and would be concentrated on a limited number of vacant parcels and in the form of infill/intensification on sites

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either already developed and/or underutilized, and/or in close proximity to existing development, where future development would have a lesser light and glare impact.

Currently, the EIR Study Area contains many existing sources of nighttime illumination. These include street and parking area lights, building-mounted lights, illuminated signage, security lighting, and interior and exterior lighting on existing residential, commercial, and institutional buildings. Glare is primarily from building materials and parked cars. Additional on-site light and glare is caused by surrounding land uses and traffic on US Highway 101, I-280, SR-82, and SR-92.

Future development and activities under the proposed project could intensify lighting sources throughout the EIR Study Area. Future lighting would involve uses similar to the existing downtown, urban, and suburban uses in the EIR Study Area and sources of light and glare associated with these uses would be similar in intensity and nature to the existing source of light and glare. In addition to new lighting for buildings, security, and parking areas, buildout of the EIR Study Area would also include lighting that would illuminate future development locations. The proposed project also encourages the use of solar photovoltaic panels through proposed General Plan Policy CD 6-3, *Sustainable Design*. The potential for glare impacts as a result of photovoltaic panels would depend on the placement and angle of the panels, and the materials with which the panels are composed.

The proposed Community Design and Historic Resources (CD) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider impacts related to an increase in light and glare. The following General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts as a result of new sources of light and glare:

- **Goal CD-6:** Develop and maintain an attractive urban fabric that reflects San Mateo's unique visual and architectural character.
  - **Policy CD 6.10: Nighttime Lighting.** Require nighttime lighting to be energy efficient, be designed to minimize light pollution and light spillage to adjacent properties, while protecting public safety.

As described in Section 4.1.1.1, *Regulatory Framework*, in addition to general best management practices that require lighting that is context sensitive in style and intensity required under CALGreen, potential future development within City Limits, including the installation of solar panels, would also have to comply with the City's lighting standards as outlined in the SMMC, San Mateo Design Guidelines, and other adopted plans (e.g., *Downtown Area Plan*). Potential future development in the SOI would be subject to the regulations of the San Mateo County General Plan and San Mateo County Zoning Ordinance. Potential future development would be reviewed for consistency with the lighting standards regarding the appropriate use of lighting and avoidance of glare from lighting and other sources.

Compliance with these standards to reduce light spill and glare, combined with the proposed General Plan goal and policy listed above, would ensure potential future development does not generate excessive light levels or glare. Therefore, the lighting and glare from implementation of the proposed project would not substantially increase nighttime light or glare within the EIR Study Area or its surroundings. Impacts would be *less than significant*.

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**Significance without Mitigation:** Less than significant.

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AES-5	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative aesthetics impacts in the area.
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As discussed in Chapter 4, *Environmental Analysis*, of this Draft EIR, the cumulative setting includes growth within the EIR Study Area in combination with projected growth in the rest of San Mateo County and the surrounding region. The cumulative setting for visual impacts includes potential future development under the proposed project, combined with effects of development on lands adjacent to the EIR Study Area. Significant impacts, including those associated with scenic resources, visual character, and increased light and glare would generally be site-specific and would not contribute to cumulative impacts after implementation of the proposed General Plan goals, policies, and actions.

Compliance with the SMMC regulations and San Mateo Design Guidelines, along with implementation of the proposed General Plan goals, policies, and actions, would ensure any impacts to scenic vistas and/or corridors would be less-than-significant. While there are no officially designated State scenic highways within the EIR Study Area, portions of the SOI are visible from State scenic highway I-280 and potential future development would be subject to the regulations contained in the San Mateo County General Plan and San Mateo County Zoning Ordinance to avoid damage to scenic resources within State scenic highways. The proposed project is intended to ensure consistency between the General Plan, Land Use Changes, and State law; therefore, implementation of the proposed project would not conflict with applicable zoning or other regulations governing scenic quality. Light and glare from potential future development under the proposed project would be regulated through the City's lighting standards in the SMMC, the San Mateo Design Guidelines, and other adopted plans, as well as implementation of proposed General Plan goals and policies.

With adherence to existing local and regional regulations, potential future development under the proposed project would not create substantial impacts to visual resources in San Mateo or the surrounding communities. Therefore, the proposed project would not result in a cumulatively considerable impact to aesthetic resources and cumulative impacts would be *less than significant*. No mitigation measures are required.

**Significance without Mitigation:** Less than significant.



## 4.2 AIR QUALITY

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential air quality impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts from implementation of the proposed project. Greenhouse gas (GHG) emissions impacts are addressed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR.

The evaluation in this chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for plan-level analysis. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. In this chapter “emissions” refers to the actual quantity of pollutant, measured in pounds per day (lbs/day) and “concentrations” refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ).

The analysis in this chapter is based on the projected buildout of the proposed project. The projected buildout is modeled using the California Air Resources Board’s (CARB) 2021 Emissions Factor Model (EMFAC2021), the Off-Road Emissions Factor Model (OFFROAD2021), natural gas use provided by Pacific Gas and Electric (PG&E) compiled for the City’s recent GHG emissions inventory, electricity use provided by PG&E and Peninsula Clean Energy (PCE) compiled for the City’s recent GHG emissions inventory, and trip generation and vehicle miles traveled (VMT) provided by Kittelson and Associates. Trip generation is available as Appendix D, *Noise Data*, and VMT calculations are in Chapter 4.15, *Transportation*, of this Draft EIR. The criteria air pollutant emissions modeling is included in Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

### 4.2.1 ENVIRONMENTAL SETTING

#### 4.2.1.1 AIR POLLUTANTS OF CONCERN

##### Criteria Air Pollutants

Pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law under the federal Clean Air Act (“National”) and California Clean Air Act, respectively. The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from a specific source; secondary air pollutants occur through chemical reactions. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb) are primary air pollutants. Of these, CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. ROG and NO<sub>x</sub> are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants. Each of the primary and secondary criteria air

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pollutants and its known health effects are described next, and Table 4.2-1, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

- **Carbon Monoxide (CO)** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.<sup>1</sup>
- **Reactive Organic Gases (ROGs)/Volatile Organic Compounds (VOCs)** are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O<sub>3</sub>. There are no AAQS established for ROGs. However, because they contribute to the formation of O<sub>3</sub>, BAAQMD has established a significance threshold for this pollutant.
- **Nitrogen Oxides (NO<sub>x</sub>)** are a by-product of fuel combustion and contribute to the formation of O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The two major components of NO<sub>x</sub> are nitric oxide (NO) and NO<sub>2</sub>. The principal component of NO<sub>x</sub> produced by combustion is NO, but NO reacts with oxygen to form NO<sub>2</sub>, creating the mixture of NO and NO<sub>2</sub> commonly called NO<sub>x</sub>. NO<sub>2</sub> absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure.<sup>5</sup> NO<sub>2</sub> acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO<sub>2</sub> is only potentially irritating. There is some indication of a relationship between NO<sub>2</sub> and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million (ppm).
- **Sulfur Dioxide (SO<sub>2</sub>)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO<sub>2</sub>. When SO<sub>2</sub> forms sulfates (SO<sub>4</sub>) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO<sub>x</sub>). Thus, SO<sub>2</sub> is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO<sub>2</sub> may irritate the

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<sup>1</sup> Bay Area Air Quality Management District, April 2017, *California Environmental Quality Act: Air Quality Guidelines*, [https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), accessed May 25, 2023.

upper respiratory tract. At lower concentrations and when combined with particulates, SO<sub>2</sub> may do greater harm by injuring lung tissue.<sup>2</sup>

- **Suspended Particulate Matter (PM<sub>10</sub>)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. In the San Francisco Bay Area Air Basin (SFBAAB), most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Inhalable coarse particles, or PM<sub>10</sub>, include particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less.

Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM<sub>10</sub> bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates.<sup>7</sup>

- **Suspended Particulate Matter (PM<sub>2.5</sub>)** is another form of fine particulate matter that have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch). Fine particulate matter originates from a variety of sources, including fossil fuel combustion, residential wood burning and cooking, and natural sources, such as wildfires and dust. As mentioned above, extended exposure to particulate matter can cause negative effects on the respiratory system, such as triggering asthma attacks, aggravating bronchitis, and diminishing lung function. PM<sub>2.5</sub> studies have also found harm to the cardiovascular system and impacts on the brain, such as reduced cognitive function.

Local jurisdictions have the option of developing community risk reduction plans (CRRPs) to cumulatively reduce community wide PM<sub>2.5</sub> concentrations by following a comprehensive plan. Stationary source screening maps contain all the facilities in the Bay Area where a permit has been issued and that emit one or more toxic air contaminant (TACs). These stationary source screening maps can be used as a basis for community baseline conditions and to evaluate screening-level health risk impacts using the cavity effects equation. An alternative screening methodology is to use CARB's gas station screening tool to estimate cancer risk and chronic/acute hazards from gas station emissions.<sup>3</sup>

- **Ozone (O<sub>3</sub>)** is commonly referred to as "smog" and is a gas that is formed when ROGs and NO<sub>x</sub>, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O<sub>3</sub> is a secondary criteria air pollutant. O<sub>3</sub> concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions to the formation of this pollutant. O<sub>3</sub> poses a health threat to those who

<sup>2</sup> Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act: Air Quality Guidelines*, [https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), accessed May 25, 2023.

<sup>3</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

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already suffer from respiratory diseases as well as to healthy people. O<sub>3</sub> levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. O<sub>3</sub> can also damage plants and trees and materials such as rubber and fabrics.<sup>4</sup>

- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phasing out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the proposed project.

**TABLE 4.2-1 CRITERIA AIR POLLUTANT HEALTH EFFECTS SUMMARY**

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	<ul style="list-style-type: none"> <li>▪ Chest pain in heart patients</li> <li>▪ Headaches, nausea</li> <li>▪ Reduced mental alertness</li> <li>▪ Death at very high levels</li> </ul>	<ul style="list-style-type: none"> <li>▪ Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves</li> </ul>
Ozone (O <sub>3</sub> )	<ul style="list-style-type: none"> <li>▪ Cough, chest tightness</li> <li>▪ Difficulty taking a deep breath</li> <li>▪ Worsened asthma symptoms</li> <li>▪ Lung inflammation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Atmospheric reaction of organic gases with nitrogen oxides in sunlight</li> </ul>
Nitrogen Dioxide (NO <sub>2</sub> )	<ul style="list-style-type: none"> <li>▪ Increased response to allergens</li> <li>▪ Aggravation of respiratory illness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Same as carbon monoxide sources</li> </ul>
Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	<ul style="list-style-type: none"> <li>▪ Hospitalizations for worsened heart diseases</li> <li>▪ Emergency room visits for asthma</li> <li>▪ Premature death</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cars and trucks (particularly diesels)</li> <li>▪ Fireplaces and woodstoves</li> <li>▪ Windblown dust from overlays, agriculture, and construction</li> </ul>
Sulfur Dioxide (SO <sub>2</sub> )	<ul style="list-style-type: none"> <li>▪ Aggravation of respiratory disease (e.g., asthma and emphysema)</li> <li>▪ Reduced lung function</li> </ul>	<ul style="list-style-type: none"> <li>▪ Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes</li> </ul>
Lead (Pb)	<ul style="list-style-type: none"> <li>▪ Behavioral and learning disabilities in children</li> <li>▪ Nervous system impairment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Contaminated soil</li> </ul>

Sources: California Air Resources Board, 2023, Common Air Pollutants: Air Pollution and Health, <https://ww2.arb.ca.gov/resources/common-air-pollutants>, accessed May 25, 2023; South Coast Air Quality Management District, May 6, 2005, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>, accessed May 25, 2023.

<sup>4</sup> Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act: Air Quality Guidelines*, [https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), accessed May 25, 2023.

## Toxic Air Contaminants

The California Health and Safety Code defines a toxic air contaminant (TAC) as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code Section 7412[b]) is a toxic air contaminant. People exposed to toxic air pollutants at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems.<sup>5</sup> CARB has identified over 200 substances and groups of substances as TACs.<sup>6</sup> Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control measures. The majority of the estimated health risks from TACs can be attributed to relatively few compounds. The most important compounds are particulate matter from diesel-fueled engines.

In 1998, CARB identified Diesel Particulate Matter (DPM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. According to BAAQMD, PM emitted from diesel engines contributes to more than 85 percent of the cancer risk in the SFBAAB. Cancer risk from TACs is highest near major DPM sources.<sup>7</sup>

### 4.2.1.2 REGULATORY FRAMEWORK

Federal, State, and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the EIR Study Area is subject to the rules and regulations imposed by the USEPA, CARB, the California Environmental Protection Agency (CalEPA), and BAAQMD. The regulatory framework that is potentially applicable to the proposed project is also summarized below.

## Federal and State Regulations

AAQS have been adopted at federal and state levels for criteria air pollutants. In addition, both the federal and state governments regulate the release of TACs. San Mateo is in the SFBAAB and is subject to the rules and regulations imposed by BAAQMD, the national AAQS adopted by the USEPA, and the California AAQS adopted by CARB. Federal, State, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

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<sup>5</sup> United States Environmental Protection Agency, updated February 2020, Health and Environmental Effects of Hazardous Air Pollutants, <https://www.epa.gov/haps/health-and-environmental-effects-hazardous-air-pollutants>, accessed May 25, 2023.

<sup>6</sup> California Air Resources Board, 2022, CARB Identified Toxic Air Contaminants, <https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants>, accessed May 25, 2023.

<sup>7</sup> Bay Area Air Quality Management District, April 2014, *Improving Air Quality & Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective & Path Forward (2004-2013)*, [https://www.baaqmd.gov/~/\\_media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE\\_Retrospective\\_April2014.ashx?la=en](https://www.baaqmd.gov/~/_media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE_Retrospective_April2014.ashx?la=en), accessed May 25, 2023.



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### *Ambient Air Quality Standards*

The Clean Air Act was passed in 1963 by the United States Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tends to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

Both California and the federal government have established health based AAQS for seven air pollutants, which are shown in Table 4.2-2, *Ambient Air Quality Standards for Criteria Pollutants*. These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:<sup>8</sup>

- Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards.
- Heavy-Duty (Tractor-Trailer) GHG Regulation.
- Advanced Clean Cars Regulation.
- Advanced Clean Fleets Regulation.
- Senate Bill (SB) 1078 and SB 107: Renewables Portfolio Standards.
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards.
- Title 24, Part 6, CCR: Building Energy Efficiency Standards.
- Title 24, Part 11, CCR: Green Building Standards Code.

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<sup>8</sup> See Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR for a description of regulations that reduce emissions including Assembly Bill 32, also known as the Global Warming Solutions Act, Senate Bill 375, also known as the Sustainable Communities and Climate Protection Act. See Chapter 4.15, *Transportation*, of this Draft EIR for a description on Senate Bill 743, and how it relates to reducing vehicle miles traveled or “VMT.”

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**TABLE 4.2-2 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS**

Pollutant	Averaging Time	California Standard <sup>a</sup>	Federal Primary Standard <sup>b</sup>	Major Pollutant Sources
Ozone (O <sub>3</sub> ) <sup>c</sup>	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Respirable Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>d</sup>	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m <sup>3</sup>	
Lead (Pb)	30-Day Average	1.5 µg/m <sup>3</sup>	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m <sup>3</sup>	
	Rolling 3-Month Average	*	0.15 µg/m <sup>3</sup>	
Sulfates (SO <sub>4</sub> ) <sup>e</sup>	24 hours	25 µg/m <sup>3</sup>	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H <sub>2</sub> S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.

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**TABLE 4.2-2 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS**

Pollutant	Averaging Time	California Standard <sup>a</sup>	Federal Primary Standard <sup>b</sup>	Major Pollutant Sources
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Notes: ppm: parts per million;  $\mu\text{g}/\text{m}^3$ : micrograms per cubic meter; \*Standard has not been established for this pollutant/duration by this entity.

<sup>a</sup>. California standards for  $\text{O}_3$ , CO (except 8-hour Lake Tahoe),  $\text{SO}_2$  (1 and 24 hour),  $\text{NO}_2$ , and particulate matter ( $\text{PM}_{10}$ ,  $\text{PM}_{2.5}$ , and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>b</sup>. National standards (other than  $\text{O}_3$ , PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The  $\text{O}_3$  standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For  $\text{PM}_{10}$ , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above  $150 \mu\text{g}/\text{m}^3$  is equal to or less than one. For  $\text{PM}_{2.5}$ , the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

<sup>c</sup>. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

<sup>d</sup>. On December 14, 2012, the national annual  $\text{PM}_{2.5}$  primary standard was lowered from  $15 \mu\text{g}/\text{m}^3$  to  $12.0 \mu\text{g}/\text{m}^3$ . The existing national 24-hour  $\text{PM}_{2.5}$  standards (primary and secondary) were retained at  $35 \mu\text{g}/\text{m}^3$ , as was the annual secondary standard of  $15 \mu\text{g}/\text{m}^3$ . The existing 24-hour  $\text{PM}_{10}$  standards (primary and secondary) of  $150 \mu\text{g}/\text{m}^3$  also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

<sup>e</sup>. On June 2, 2010, a new 1-hour  $\text{SO}_2$  standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

Source: California Air Resources Board, March 2017, *Short-Lived Climate Pollutant Reduction Strategy*, [https://ww2.arb.ca.gov/sites/default/files/2020-07/final\\_SLCP\\_strategy.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf), accessed May 26, 2023.

### *Tanner Air Toxics Act and Air Toxics “Hot Spot” Information and Assessment Act*

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and reduce exposure to these contaminants to protect public health. A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code Section 7412[b]) is a toxic air contaminant. Under State law, CalEPA, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). AB 1807 sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the airborne toxics control measure must reduce exposure to below that threshold. If there is no safe threshold, the airborne toxics control measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities<sup>9</sup> are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

## Regional Regulations

### *Bay Area Air Quality Management District*

BAAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the SFBAAB. Air quality conditions in the SFBAAB have improved significantly since BAAQMD was created in 1955.<sup>10</sup> BAAQMD prepares air quality management plans (AQMP) to attain ambient air quality standards in the SFBAAB. BAAQMD prepares ozone attainment plans for the National O<sub>3</sub> standard and clean air plans for the California O<sub>3</sub> standard BAAQMD prepares these air quality management plans in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) to ensure consistent assumptions about regional growth.

### 2017 Clean Air Plan

BAAQMD adopted the 2017 *Clean Air Plan, Spare the Air, Cool the Climate* (2017 Clean Air Plan) on April 19, 2017, making it the most recently adopted comprehensive plan. The 2017 Clean Air Plan incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2017 Clean Air Plan serves as an update to the adopted Bay Area 2010 Clean Air Plan and continues to provide the framework for SFBAAB to achieve attainment of the California and National AAQS. The 2017 Clean Air Plan updates the Bay Area's ozone plan, which is based on the "all feasible measures" approach to meet the requirements of the California Clean Air Act. Additionally, it sets a goal of reducing health risk impacts to local communities by 20 percent between 2015 and 2020. Furthermore the 2017 Clean Air

<sup>9</sup> Each district is responsible for establishing the prioritization score threshold at which facilities are required to prepare a health risk assessment. In the Bay Area, facilities that generate a cancer risk of greater or equal to 10 in a million and a non-cancer chronic or acute risk greater or equal to 10 in a million are high priority facilities. Types of facilities that have the potential to generate risks of this level include refineries, other heavy industrial manufacturing/industrial processes, and fueling stations.

<sup>10</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 25, 2023.

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Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the State's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:<sup>11</sup>

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A multipollutant control strategy was developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, TACs, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. The control strategy includes these key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.

### Community Air Risk Evaluation (CARE) Program

The BAAQMD Community Air Risk Evaluation program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area, primarily DPM. The last update to this program was conducted in 2014. Based on findings of the 2014 report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant cancer risks: 1,3-butadiene contributed 4 percent of the cancer risk-weighted emissions and benzene contributed 3 percent. Collectively, five compounds—DPM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13

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<sup>11</sup> Bay Area Air Quality Management District, April 19, 2017, *Final 2017 Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*, [https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf?la=en](https://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 May 25, 2023.



percent). Overall, cancer risk from TACs dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for State diesel regulations and other reductions.<sup>12</sup>

The major contributor to acute and chronic noncancer health effects in the SFBAAB is acrolein (C<sub>3</sub>H<sub>4</sub>O). Major sources of acrolein are on-road mobile sources and aircraft near freeways and commercial and military airports.<sup>13</sup> Currently CARB does not have certified emission factors or an analytical test method for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, BAAQMD does not conduct health risk screening analysis for acrolein emissions.<sup>14</sup>

### Assembly Bill 617 Community Action Plans

AB 617 was signed into law in July 2017 to develop a new community-focused program to more effectively reduce exposure to air pollution and preserve public health in environmental justice communities. AB 617 directs CARB and all local air districts to take measures to protect communities disproportionately impacted by air pollution by monitoring emissions and implementing air pollution control strategies.

On September 27, 2018, CARB approved BAAQMD's recommended communities for monitoring and emission-reduction planning. The State approved communities for year 1 of the program as well as communities that would move forward over the next five years. Bay Area recommendations included all the Community Air Risk Evaluation areas as well as areas with large sources of air pollution (refineries, seaports, airports, etc.), areas identified via statewide screening tools as having pollution and/or health burden vulnerability, and areas with low life expectancy.<sup>15</sup>

- **Year 1 Communities:**
  - **West Oakland.** The West Oakland community was selected for BAAQMD's first Community Action Plan. In 2017, cancer risk from sources in West Oakland (local sources) was 204 in a million. The primary sources of air pollution in West Oakland include heavy trucks and cars, port

<sup>12</sup> Bay Area Air Quality Management District, April 2014, *Improving Air Quality & Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective & Path Forward (2004-2013)*, [https://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE\\_Retrospective\\_April2014.ashx?la=en](https://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CARE%20Program/Documents/CARE_Retrospective_April2014.ashx?la=en), accessed May 25, 2023.

<sup>13</sup> Bay Area Air Quality Management District, September 2006, *Community Air Risk Evaluation Program: Phase I Findings and Policy Recommendations Related to Toxic Air Contaminants in the San Francisco Bay Area*, [https://www.baaqmd.gov/~media/files/planning-and-research/care-program/care\\_p1\\_findings\\_recommendations\\_v2.pdf](https://www.baaqmd.gov/~media/files/planning-and-research/care-program/care_p1_findings_recommendations_v2.pdf), accessed May 25, 2023.

<sup>14</sup> Bay Area Air Quality Management District, January 2010, *Air Toxics NSR Program Health Risk Screening Analysis (HSRA) Guidelines*, [http://www.baaqmd.gov/~media/Files/Engineering/Air%20Toxics%20Programs/hrs\\_a\\_guidelines.ashx](http://www.baaqmd.gov/~media/Files/Engineering/Air%20Toxics%20Programs/hrs_a_guidelines.ashx), accessed May 25, 2023.

<sup>15</sup> Bay Area Air Quality Management District, April 16, 2019, *San Francisco Bay Area Community Health Protection Program*, [https://www.baaqmd.gov/~media/files/ab617-community-health/2019\\_0325\\_ab617onepager-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en), accessed May 25, 2023.

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and rail sources, large industries, and, to a lesser extent, other sources such as residential sources (i.e., wood burning). The majority (over 90 percent) of cancer risk is from DPM<sub>2.5</sub>.<sup>16</sup>

- **Richmond.** Richmond was selected for a community monitoring plan in year 1 of the AB 617 program. The Richmond area is in western Contra Costa County and includes most of the City of Richmond and portions of El Cerrito. It also includes communities just north and east of Richmond, such as San Pablo and several unincorporated communities, including North Richmond. The primary goals of the Richmond monitoring effort are to leverage historical and current monitoring studies, to better characterize the area's mix of sources, and to more fully understand the associated air quality and pollution impact.<sup>17</sup>
- **Year 2 to 5 Communities:** East Oakland/San Leandro, Eastern San Francisco, the Pittsburg-Bay Point area, San Jose, Tri-Valley, and Vallejo are slated for action in years 2 to 5 of the AB 617 program.<sup>18</sup>

As identified above, AB 617 is not directly applicable to San Mateo since BAAQMD has not currently designated the City of San Mateo or communities within the EIR Study Area as disproportionately impacted by air pollution in either the Year 1 or Year 2-to-5 communities.

### Air District Rules and Regulations

#### Regulation 7, Odorous Substances

Sources of objectionable odors may occur within the EIR Study Area. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property." Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

#### Naturally Occurring Asbestos Program

To reduce public exposure to naturally occurring asbestos, BAAQMD places Airborne Toxic Control Measures to regulate all construction, maintenance, grading, and mining activities that could potentially

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<sup>16</sup> Bay Area Air Quality Management District, October 2019, *Owning Our Air: The West Oakland Community Action Plan*, <https://www.baaqmd.gov/~media/files/ab617-community-health/west-oakland/100219-files/final-plan-vol-1-100219-pdf.pdf?la=en>, accessed May 25, 2023.

<sup>17</sup> Bay Area Air Quality Management District, April 16, 2019, *San Francisco Bay Area Community Health Protection Program*, [https://www.baaqmd.gov/~media/files/ab617-community-health/2019\\_0325\\_ab617onepager-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en), accessed May 25, 2023.

<sup>18</sup> Bay Area Air Quality Management District, April 16, 2019, *San Francisco Bay Area Community Health Protection Program*, [https://www.baaqmd.gov/~media/files/ab617-community-health/2019\\_0325\\_ab617onepager-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/ab617-community-health/2019_0325_ab617onepager-pdf.pdf?la=en), accessed May 25, 2023.

produce dust containing naturally occurring asbestos.<sup>19</sup> The Naturally Occurring Asbestos Program also requires the best available dust mitigation measures to be followed to reduce exposure to airborne asbestos.<sup>20</sup>

### Other Air District Regulations

In addition to the plans and programs described above, BAAQMD administers several specific regulations on various sources of pollutant emissions that would apply to potential future development constructed, including:

- Regulation 2, Rule 2, New Source Review
- Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- Regulation 6, Rule 1, General Requirements
- Regulation 6, Rule 2, Commercial Cooking Equipment
- Regulation 8, Rule 3, Architectural Coatings
- Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- Regulation 8, Rule 7, Gasoline Dispensing Facilities
- Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing
- Regulation 11, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities

### *City/Council Association of Governments of San Mateo County*

The City/Council Association of Governments of San Mateo County (C/CAG) is the congestion management agency for San Mateo County. C/CAG is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision making and air quality plans. C/CAG's latest congestion management program (CMP) is the San Mateo Congestion Management Program, adopted December 2021.<sup>21</sup> C/CAG's countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, C/CAG's updated CMP includes multimodal performance standards and trip reduction and transportation demand management strategies consistent with the goal of reducing regional VMT in accordance with SB 375. Strategies identified in the 2021 CMP for San Mateo County, where local jurisdictions are responsible agencies, include:

- **Designated Roadway System.** Establish and maintain the designated CMP roadway system that allows performance monitoring in terms of established level-of-service standards.

<sup>19</sup> Bay Area Air Quality Management District, 2023, Naturally Occurring Asbestos. <https://www.baaqmd.gov/permits/asbestos/naturally-occurring-asbestos>, accessed May 25, 2023.

<sup>20</sup> Bay Area Air Quality Management District, 2019, Compliance Advisory, Naturally Occurring Asbestos Program Fee Change. [https://www.baaqmd.gov/~media/files/compliance-and-enforcement/advisories/asbestos-atcm/noa-compliance-advisory-2019\\_final-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/compliance-and-enforcement/advisories/asbestos-atcm/noa-compliance-advisory-2019_final-pdf.pdf?la=en), accessed May 25, 2023.

<sup>21</sup> City/County Association of Governments of San Mateo County, December 2021, *San Mateo County Congestion Management Plan*, [https://ccag.ca.gov/wp-content/uploads/2022/01/258-018-San-Mateo-CMP-Report\\_Final.pdf](https://ccag.ca.gov/wp-content/uploads/2022/01/258-018-San-Mateo-CMP-Report_Final.pdf), accessed May 25, 2023.

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- **Roadway System Level of Service.** Establish level-of-service standards using the Transportation Research Board's Circular 212, the latest version of the Highway Capacity Manual (HCM) or a C/CAG adopted alternative that is consistent with the HCM.
- **System Performance.** Establish performance measures to evaluate current and future multimodal system performance for the movement of people and goods.
- **Trip Reduction and Travel Demand Element.** Promote alternative transportation methods to reduce traffic congestion, increase use of park-and-ride lots, improvements in the balance between jobs and housing, and other strategies for reducing vehicle trips, including flexible work hours, telecommuting, and parking management programs.
- **Land Use Impact Analysis Program.** Analyze the impacts of land use decisions made by local jurisdictions on the regional transportation system (both highways and transit).
- **Deficiency Plan Guidelines.** Determine every two years whether San Mateo County and cities and towns within the county conform to the requirements of the CMP based on information obtained through monitoring.
- **Capital Improvement Program.** Include a seven-year Capital Improvement Program to maintain or improve the performance of the multimodal system for the movement of people and goods and to mitigate regional transportation impacts identified through the Land Use Analysis Program.
- **Database and Travel Demand Model.** In consultation with the regional transportation planning agency, cities, and the county, develop a uniform database on traffic impacts for use in a countywide travel demand model.

### *Plan Bay Area 2050*

MTC and ABAG adopted *Plan Bay Area 2050* (Plan Bay Area) on October 21, 2021.<sup>22</sup> Plan Bay Area provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Strategies to reduce GHG emissions include focusing housing and commercial construction in walkable, transit-accessible places; investing in transit and active transportation; and shifting the location of jobs to encourage shorter commutes. As part of the implementing framework for Plan Bay Area, local governments have identified Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) to focus growth. PDAs are transit-oriented, infill development opportunity areas within existing communities. TPAs are half-mile buffers surrounding major transit stops or terminals. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4, *Environmental Analysis*, of this Draft EIR, the EIR Study Area has four PDAs and a TPA.

### *Nitrogen Oxides from Natural Gas-Fired Furnaces, Boilers, and Water Heaters*

BAAQMD adopted amendments to Regulation 9, Inorganic Gaseous Pollutants, Rule 4, Nitrogen Oxides from Natural Gas-Fired Furnaces (Rule 9-4) and Rule 6, Nitrogen Oxides Emissions from Natural Gas-Fired

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<sup>22</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed May 25, 2023.

Boilers and Water Heaters (Rule 9-6). Space- and water-heating appliances generate a large portion of nitrogen oxide (NO<sub>x</sub>) emissions from sources in the Bay Area. NO<sub>x</sub> is a key criteria pollutant as a precursor to ozone and secondary particulate matter (PM) formation. The amendments would require more stringent NO<sub>x</sub> emission standards for space- and water-heating appliances within BAAQMD's jurisdiction starting in year 2023 and would substantially reduce NO<sub>x</sub> emissions from these appliances commonly found in single-family homes and commercial applications.

The amendments to Rules 9-4 and 9-6 include the following elements:

- Sales and installation of smaller water heaters and boilers (below 75,000 BTU/hour) must be zero emission, starting in 2027.
- Sales and installation of furnaces (heat input rate less than 175,000 BTU/hour) must be zero emission starting in 2029.
- Sales of larger water heaters and boilers (between 75,000 and 2 million BTU/hour) must be zero emission starting in 2031.
- Existing appliances can remain in operation, but the rule would apply once they need replacement.

## Local Regulations

### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to air quality are primarily in the Land Use Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.2.3, *Impact Discussion*.

### *Climate Action Plan*

Adopted in April 2020, the San Mateo 2020 CAP is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.<sup>23</sup> The CAP allows City decision-makers and the community to understand the sources and magnitude of local GHG emissions and identifies a strategy, reduction measures, and implementation actions the City will use to achieve targets consistent with State recommendations of 15 percent below 2005 emissions levels by 2020, 4.3 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) per person by 2030, and 1.2 MTCO<sub>2</sub>e per person by 2050. The CAP adopted in 2020 updated and expanded the City's goals, measures, and actions to address GHG emissions from the energy, water, transportation, solid waste, and off-road equipment sectors. It also revises San Mateo's implementation program and framework to monitor and report progress. A technical update to the CAP with updated inventories and forecasts has been conducted as part of the proposed project.

<sup>23</sup> City of San Mateo, April 2020, *2020 Climate Action Plan*, [cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=](https://cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=), accessed May 25, 2023.



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### *City of San Mateo Municipal Code*

The San Mateo Municipal Code (SMMC) includes various directives pertaining to air quality. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to air quality impacts are included in Title 7, *Health, Sanitation and Public Nuisance*, Title 13, *Parks and Recreation*, Title 24, *Transportation System Management (TSM)*, and Title 27, *Zoning*.

- Chapter 7.33, *Recycling and Salvaging of Construction and Demolition Debris*, requires the recycling of construction and demolition debris to help the City reduce landfill waste, foster resource conservation, and help the City meet and exceed a diversion rate of 50 percent.
- Chapter 7.35, *Mandatory Organic Waste Disposal Reduction Ordinance*, list requirements for organic waste generators, in compliance with state recycling laws, state organic recycling laws, and the Short-Lived Climate Pollutant Reduction Act of 2016.
- Chapter 13.40, *Protected Trees*, protects, preserves, and replenishes healthy and valuable trees in the city for the health and welfare of residents and in order to counteract air pollutants and maintain climatic balances, among reasons.
- Chapter 24.01, *Transportation System Management*, encourages participation in an inter-city authority that works in partnership with employers to promote programs and services that help employers achieve their trip reduction goals in an effort to improve air quality and reduce traffic congestion in the region; facilitation of the achievement of vehicle to employee ratio standards by public and private employers subject to Regulation 13, Rule 1; and encouragement and facilitation of participation by employers with 25-99 employees in promoting commute alternatives to their employees.
- Chapter 27.56, *M1 Districts – Manufacturing*, includes regulations for smoke and odor in Section 27.56.100, *Smoke – Particulate Matter*, and Section 27.56.110, *Odorous Matter*. No stack is permitted to emit more than ten smoke units during any one hour. The rate of emission of particulate matter from all sources is not permitted to exceed a net figure of one pound per acre of lot area and during any one hour. Dust and other forms of air pollution borne by the wind from such sources as storage areas, yards, roads, and so forth are required to be kept to a minimum by appropriate landscaping, paving, oiling or other acceptable means. Any process which may involve the creation or emission of any odors is required to be provided with a secondary safeguard system, so that control will be maintained if the primary safeguard system should fail.
- Chapter 27.90, *TOD District – Transit Oriented Development*, implements the San Mateo Corridor Transit Oriented Development Plan in the Transit Oriented Development (TOD) district to encourage more insensitive development within walking distance of transit stops. TOD is intended to provide for an integrated mix of land uses that support transit use through site design that enhances accessibility to stations and is supportive of pedestrian and bicycle use.

### 4.2.1.3 EXISTING CONDITIONS

#### San Francisco Bay Area Air Basin Conditions

The SFBAAB comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. Air quality in the SFBAAB is determined by such natural factors as topography, meteorology, and climate in addition to the presence of existing air pollution sources and ambient conditions, as described below:<sup>24</sup>

- **Meteorology:** The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, that distorts normal wind flow patterns. The Coast Range<sup>25</sup> splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allows air to flow in and out of the Bay Area and the Central Valley. The climate is dominated by the strength and location of a semipermanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.
- **Predominant Wind Patterns:** During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San José when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon, and the sea breeze deepens and increases in velocity while spreading inland. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. In the winter, stormy conditions with moderate to strong winds are frequent, as are periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing because of little or no wind) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the

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<sup>24</sup> Bay Area Air Quality Management District, May 2017, *California Environmental Quality Act: Air Quality Guidelines*, [https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), accessed May 25, 2023.

<sup>25</sup> The Coast Ranges traverses California's west coast from Humboldt County to Santa Barbara County.

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Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

- **Wind Circulation:** Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak—namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthy levels.
- **Inversions:** An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly. Elevation inversions<sup>26</sup> are more common in the summer and fall, and radiation inversions<sup>27</sup> are more common during the winter. The highest air pollutant concentrations generally occur during inversions.
- **Temperature:** Summer temperatures are determined in large part by the effect of differential heating between land and water surfaces. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10 degrees Fahrenheit. In the winter, the relationship of minimum and maximum temperatures is reversed. During the day the temperature contrast between the coast and inland areas is small, and at night it is large.
- **Precipitation:** The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the SFBAAB to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys. During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants disperse more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.

### Attainment Status of the SFBAAB

The AQMP provides the framework for air quality basins to achieve attainment of the State and federal AAQS through the State Implementation Plan. Areas that meet AAQS are classified attainment areas, and

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<sup>26</sup> When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.

<sup>27</sup> During the night, the ground cools off, radiating the heat to the sky.

areas that do not meet these standards are classified nonattainment areas. Severity classifications for O<sub>3</sub> range from marginal, moderate, and serious to severe and extreme.

- **Unclassified.** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment.** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment.** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- **Nonattainment/Transitional.** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SFBAAB is shown in Table 4.2-3, *Attainment Status of Criteria Pollutants in the San Francisco Bay Area Air Basin*. The SFBAAB is currently designated a nonattainment area for California and National O<sub>3</sub>, California and National PM<sub>2.5</sub>, and California PM<sub>10</sub> AAQS.

**TABLE 4.2-3 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN**

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Classification revoked (2005)
Ozone – 8-hour	Nonattainment (serious)	Nonattainment (marginal) <sup>a</sup>
PM <sub>10</sub> – 24-hour	Nonattainment	Unclassified/ Attainment <sup>b</sup>
PM <sub>2.5</sub> – 24-hour and Annual	Nonattainment	Unclassified/ Attainment
CO – 8-hour and 1-hour	Attainment	Attainment
NO <sub>2</sub> – 1-hour	Attainment	Unclassified
SO <sub>2</sub> – 24-hour and 1-hour	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

a. Severity classification current as of February 13, 2017.

b. In December 2014, US EPA issued final area designations for the 2012 primary annual PM<sub>2.5</sub> National AAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Sources: California Air Resources Board, October 2020, Maps of State Area Designations, <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>, accessed May 26, 2023.

California Air Resources Board, October 2018, Maps of Federal Area Designations, <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>, accessed May 26, 2023.

## Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the city have been documented and measured by BAAQMD. In 2021, BAAQMD had 32 operational monitoring stations around the Bay Area.<sup>28</sup> The nearest station to the EIR Study Area is the San Carlos Airport II Monitoring Station at 620 Airport Drive in San Carlos. Data from this station is summarized in Table 4.2-4, *Ambient*

<sup>28</sup> Bay Area Air Quality Management District, June 2022, *2022 Annual Air Monitoring Network Plan*, [https://www.baaqmd.gov/~media/files/technical-services/2022\\_network\\_plan.pdf?la=en](https://www.baaqmd.gov/~media/files/technical-services/2022_network_plan.pdf?la=en), accessed May 25, 2023.

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*Air Quality Monitoring Summary.* The data show regular violations of the State and federal PM<sub>10</sub> standards and federal PM<sub>2.5</sub> standard. Based on BAAQMD’s Impacted Communities Map, the City of San Mateo is not within a 24-hour PM<sub>2.5</sub> or 8-hour Ozone exceedance area.<sup>29</sup>

**TABLE 4.2-4 AMBIENT AIR QUALITY MONITORING SUMMARY**

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations		
	2019	2020	2021
<b>Ozone (O<sub>3</sub>)</b>			
State 1-Hour $\geq$ 0.09 ppm	0	1	0
State and Federal 8-hour $\geq$ 0.07 ppm	2	1	0
Maximum 1-Hour Conc. (ppm)	0.083	0.098	0.085
Maximum 8-Hour Conc. (ppm)	0.077	0.077	0.063
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>			
State 1-Hour $\geq$ 0.18 (ppm)	0	0	0
Maximum 1-Hour Conc. (ppb)	0.0549	0.0459	0.0405
<b>Fine Particulates (PM<sub>2.5</sub>)</b>			
Federal 24-Hour $>$ 35 $\mu\text{g}/\text{m}^3$	0	9	0
Maximum 24-Hour Conc. ( $\mu\text{g}/\text{m}^3$ )	29.5	124.1	30.1

Notes: ppm = parts per million; ppb = parts per billion;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter. Data from the Redwood City Monitoring Station. Source: California Air Resources Board, 2023, Air Pollution Data Monitoring Cards (2019, 2020, and 2021), <https://www.arb.ca.gov/adam/topfour/topfourdisplay.php>, accessed May 8, 2023.

## Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. BAAQMD defines sensitive receptors as “Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas.”<sup>30</sup>

<sup>29</sup> Bay Area Air Quality Management District, 2022, *Community Air Risk Evaluation Program*, <https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program>, accessed May 25, 2023.

<sup>30</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.



### *Environmental Justice Communities*

Disadvantaged communities identified by CalEnviroScreen 4.0 (CES4) may be disproportionately affected by and vulnerable to poor air quality.<sup>31, 32</sup> The CES cumulative score is a cumulative measure of overall environmental justice burden based on 24 indicators, including pollution, social, and health indicators, four of which are specifically having to do with air quality or air pollution. BAAQMD uses the CES tool to identify environmental justice communities (referred to as Overburdened Communities) and areas of the San Francisco Bay Area where air pollution disparities are the greatest.

Within San Mateo there are the following sensitive communities:

- BAAQMD's Overburdened Communities
- San Mateo Environmental Justice Communities
- San Mateo's General Plan Equity Priority Communities

Figure 4.2-1, *BAAQMD Overburdened Communities*, shows the areas that, according to BAAQMD, are disproportionately burdened by pollution. Figure 4.2-2, *Environmental Justice Communities*, identifies census tracts and associated neighborhoods in the EIR Study Area that have been identified as environmental justice communities through the SB 1000 process. Both BAAQMD's Overburdened Communities and the city's environmental justice communities were mapped using the CES4, a tool advocated for by community groups and developed by the State Office of Environmental Health Hazard Assessment on behalf of the CalEPA.

The City's proposed General Plan identifies low-income communities and communities of color that have experienced a combination of historic discrimination, negligence, and political and economic disempowerment. The communities disproportionately burdened by pollution and health impacts in San Mateo are called Equity Priority Communities (see Figure 4.2-3, *Equity Priority Communities*). These areas were also mapped using local knowledge and the CES4 tool, which applies a formula to each census tract in the state to generate a score that ranks the level of cumulative impacts in each area relative to the rest of the census tracts in the state. A Census tract with a higher score is one that experiences higher pollution burdens and social or health vulnerabilities than census tracts with lower scores. The City identified two equity priority communities per the data available as of December 2022: North Central and North Shoreview/Shoreview. The CES data is updated over time, and new data sources may become available, so the Equity Priority Communities mapped in the proposed General Plan may change as conditions change.

### *CalEnviroScreen Air Quality Indicators*

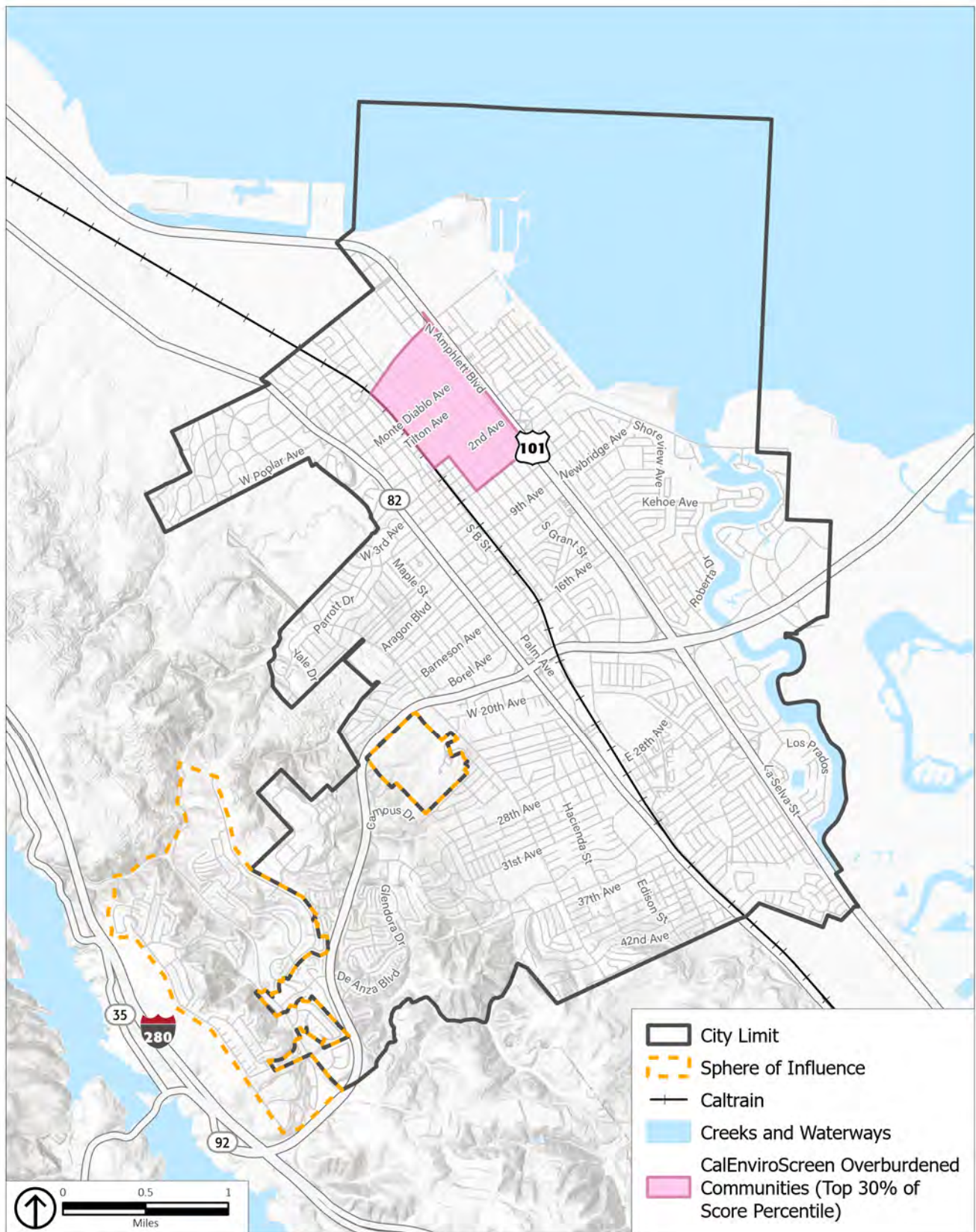
As discussed above, CES is a mapping tool that helps identify the California communities most affected by many sources of pollution and where people are especially vulnerable to pollution's effects. People in environmental justice areas identified by CES may be disproportionately affected by and vulnerable to poor air quality.

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<sup>31</sup> Under Senate Bill 535, disadvantaged communities are defined as the top 25% scoring areas from CalEnviroScreen along with other areas with high amounts of pollution and low populations.

<sup>32</sup> CalEnviroScreen 4.0. Indicator Maps can be found at: <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>

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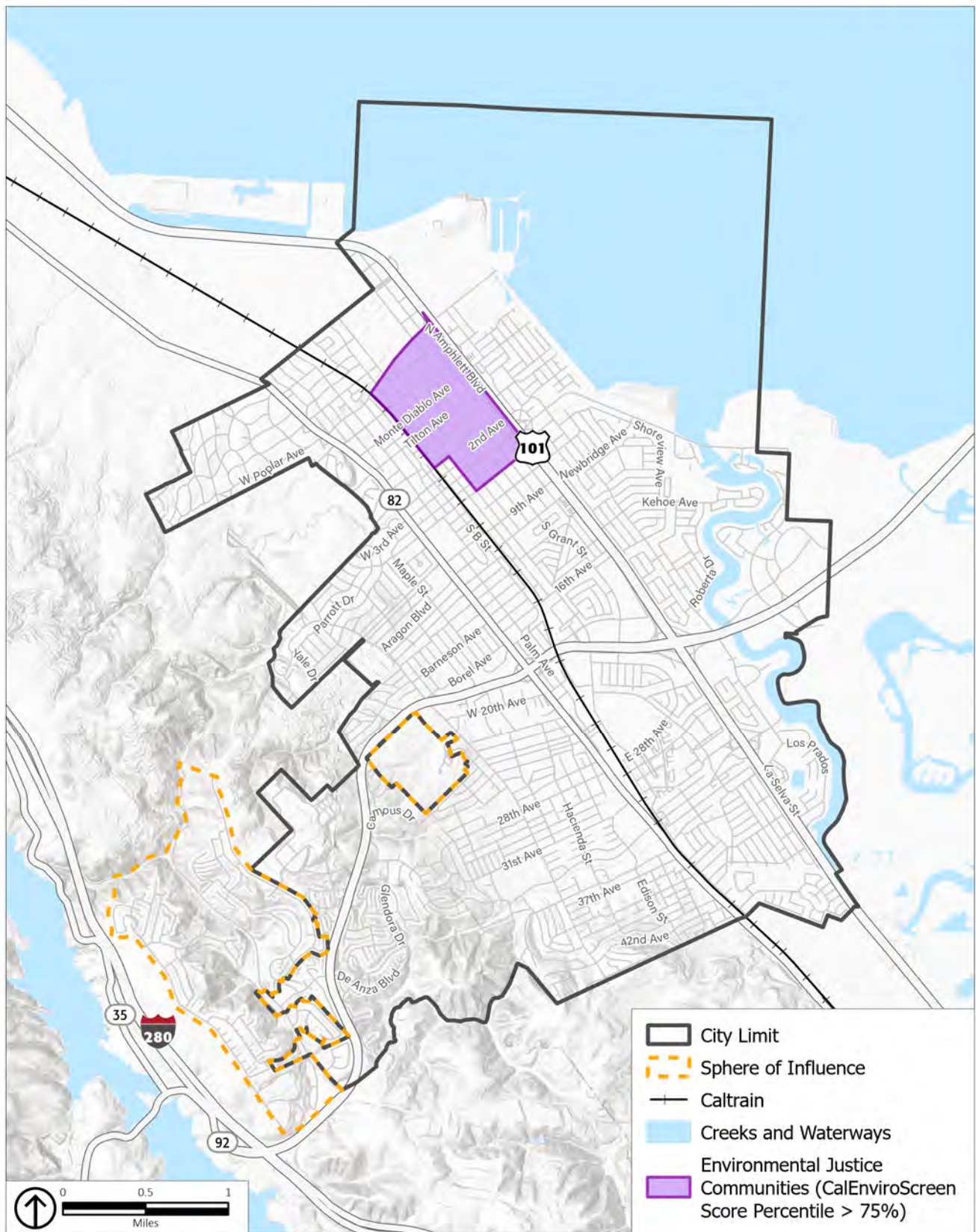


Source: CalOEHHA, 2021; PlaceWorks, 2023.

Figure 4.2-1  
BAAQMD Overburdened Communities



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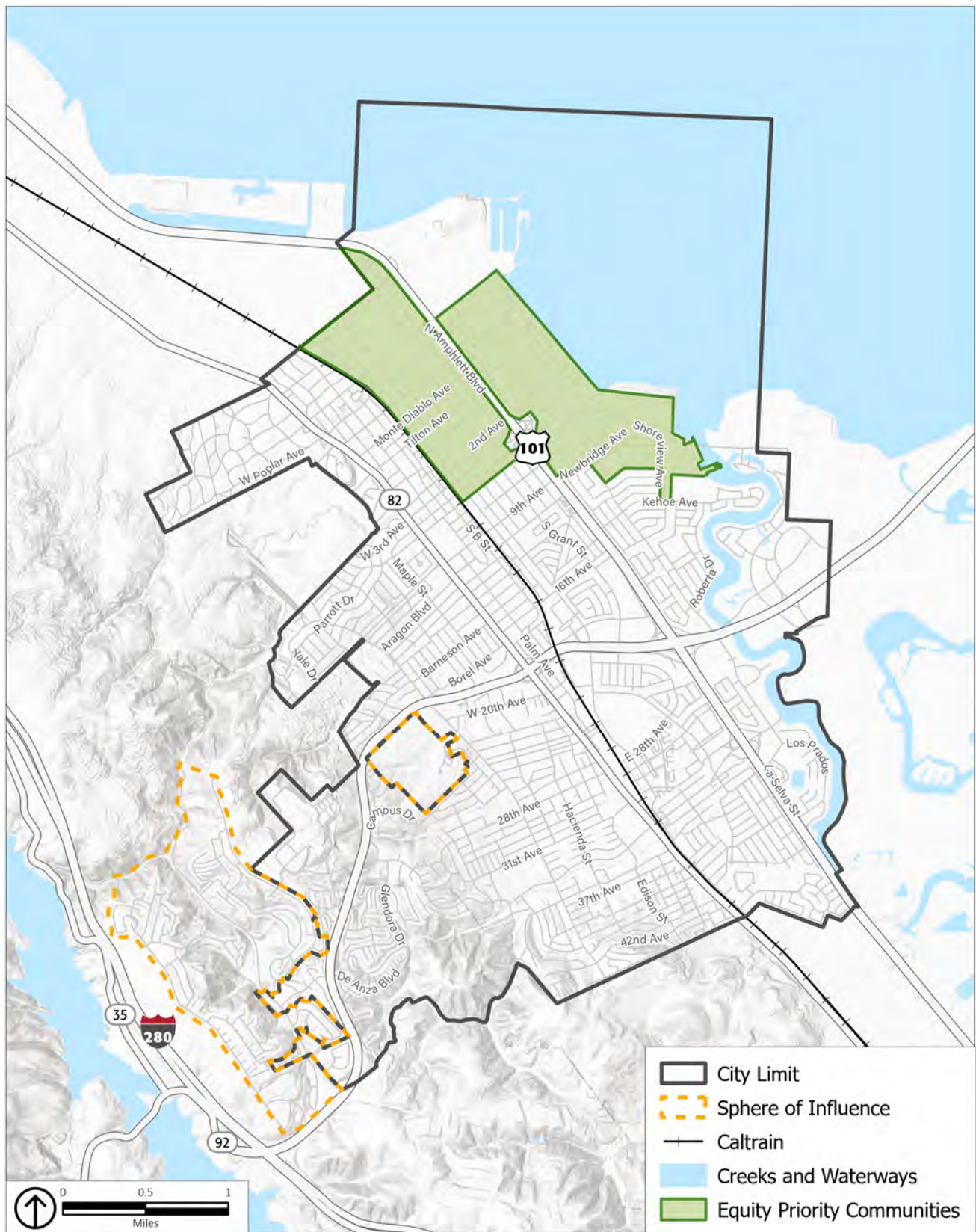


Source: CalOEHHA, 2021; PlaceWorks, 2023.

Figure 4.2-2  
Environmental Justice Communities



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Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 4.2-3  
Equal Priority Communities

CES's "pollution burden" map identifies communities that are exposed to pollution from human activities, such as air pollution (ozone, PM<sub>2.5</sub>, DPM), water pollution (drinking water contaminants), and hazardous materials (pesticide use, children's lead exposure, toxic releases), and traffic density. Figure 4.2-4, *CES4 Indicator – Cumulative Score by Percentile*, shows the pollution burden for the areas within the EIR Study Area relative to California. In CalEnviroScreen, the pollution burden scope considers the disproportionate effect of pollution on environmental justice communities, because the score weighs socioeconomic factors (educational attainment, poverty, etc.) and sensitivity of the population (asthma rates, cardiovascular disease, etc.).

Though the causes of asthma are poorly understood, it is well established that exposure to traffic and outdoor air pollutants can trigger asthma attacks. Previous research has shown that children, the elderly, racial and ethnic minorities, and low-income Californians suffer disproportionately from asthma burdens, such as asthma attacks and asthma-like symptoms.<sup>33</sup> Most Census tracts in the EIR Study Area rank in the 20th to 30th percentiles for asthma (see Figure 4.2-5, *CES4 Indicator – Asthma by Percentile*).

#### *Placement of New Sensitive Receptors*

BAAQMD adopted *Planning Healthy Places* to provide a list of best practices that should be applied when placing sensitive land uses in areas with high levels of air pollution or in close proximity to local sources of air pollution.<sup>34</sup> The overarching goal of this guidebook is to support and encourage infill development while promoting clean, healthy air for existing and future residents.

Figure 4.2-6, *San Mateo Siting Recommendations*, identifies stationary sources (BAAQMD-permitted sources) in the EIR Study Area as well as major roadways where BAAQMD recommends either implementation of best management practices to reduce risk or preparation of site-specific analysis to ensure air quality compatibility.

The key observation in BAAQMD's *Planning Healthy Places* is that proximity to air pollution sources substantially increases both exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic: DPM from trucks and benzene, and 1,3-butadiene from passenger vehicles. In *Planning Healthy Places*, BAAQMD provides a list of "Best Practices to Reduce Exposure to Local Air Pollution" that BAAQMD recommends lead agencies require for projects that introduce new receptors within the screening distances shown in Figure 4.2-6. These best practices include practices and technologies that reduce local traffic emissions, increase site buffering between receptors and emission sources, or alter

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<sup>33</sup> California Air Resources Board, 2013, October. Higher 'asthma burden' among minorities, low-income groups tied to increased exposure to air pollution. <https://ww2.arb.ca.gov/news/higher-asthma-burden-among-minorities-low-income-groups-tied-increased-exposure-air-pollution>, accessed May 25, 2023.

<sup>34</sup> Bay Area Air Quality Management District, 2016, April. Planning Healthy Places: A Guidebook for Addressing Local Sources of Air Pollutants in Community Planning. [https://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php\\_may20\\_2016-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en), accessed May 25, 2023.



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the design of proposed projects to remove receptors from locations expected to experience the highest pollutant concentrations.<sup>35</sup>

### Existing Emissions

#### *Criteria Air Pollutant Emissions Inventory*

Table 4.2-5, *Existing Regional Criteria Air Pollutant Emissions Inventory, EIR Study Area*, identifies the existing criteria air pollutant emissions inventory using emission rates for year 2019 (baseline conditions). The inventories are based on existing land uses in the EIR Study Area. The Year 2019 inventory represents the projected emissions currently generated by existing land uses using the baseline year 2019 emission factors for on-road vehicles.

**TABLE 4.2-5 EXISTING REGIONAL CRITERIA AIR POLLUTANT EMISSIONS INVENTORY, EIR STUDY AREA**

2019 EIR Study Area Criteria Air Pollutant Emissions (pounds per day)				
Emission Source	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>a</sup>	260	1,940	203	85
Energy <sup>b</sup>	35	656	49	49
Off-Road Equipment <sup>c</sup>	390	246	10	8
Consumer Products <sup>d</sup>	1,698	0	0	0
<b>Total</b>	<b>2,383</b>	<b>2,842</b>	<b>262</b>	<b>141</b>

2019 EIR Study Area Criteria Air Pollutant Emissions (tons per year)				
Emission Source	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>a</sup>	45	337	35	15
Energy <sup>b</sup>	6	120	9	9
Off-Road Equipment <sup>c</sup>	71	45	2	1
Consumer Products <sup>d</sup>	310	0	0	0
<b>Total</b>	<b>433</b>	<b>501</b>	<b>46</b>	<b>25</b>

Notes:

a. On-road transportation VMT is provided by VMT and modeled with EMFAC2021. VMT for the proposed General Plan is based on the “project’s effect” of VMT in the EIR Study Area.

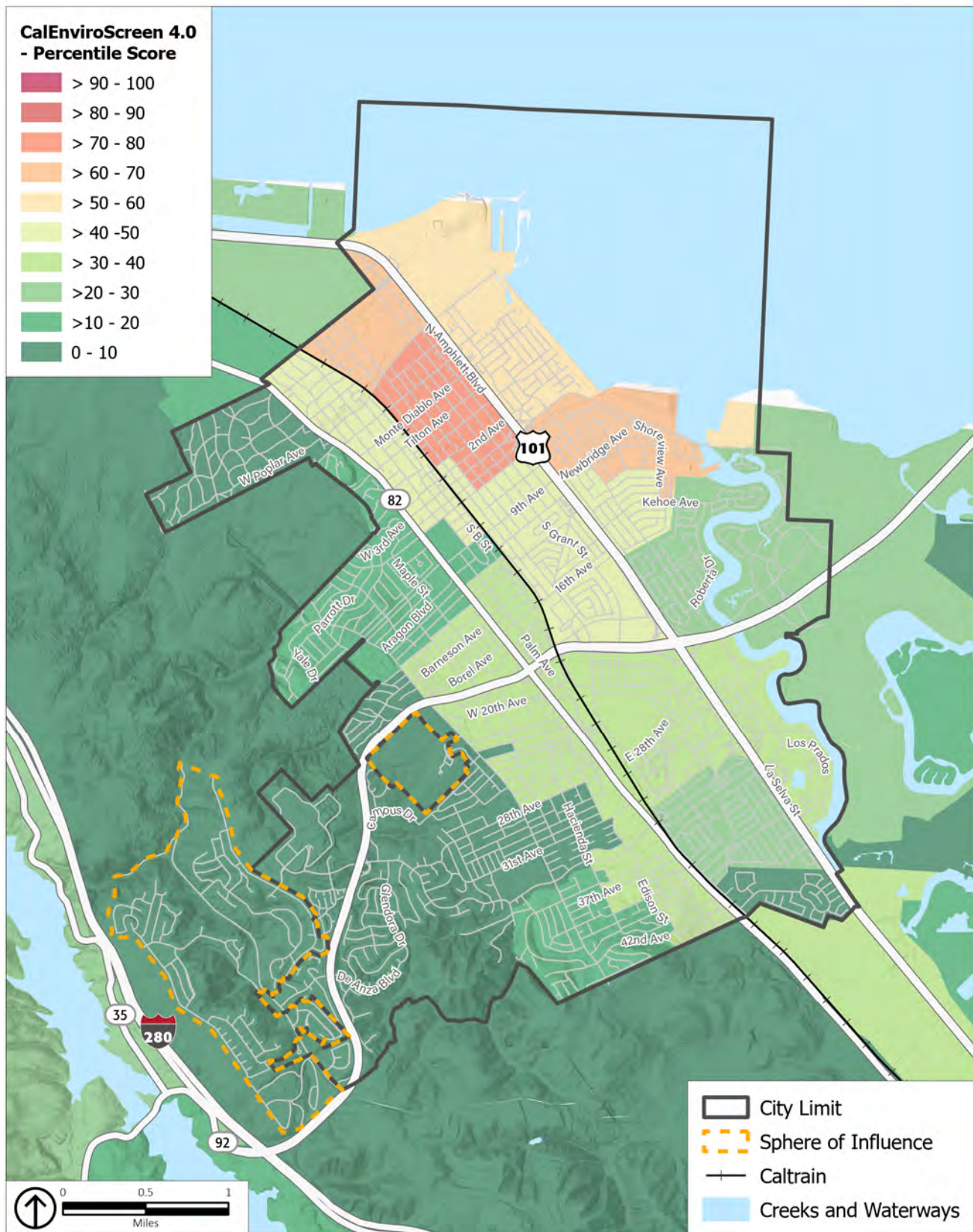
b. Building electricity and natural gas are based on data provided by the City for the GHG emissions inventory conducted for their Climate Change Action Plan from PG&E, PCE, and CalEEMod User’s Guide for natural gas criteria air pollutant emissions. The electricity rates were adjusted to reflect the increase in housing units and employment within the EIR Study Area.

c. On-road vehicles and equipment are based on the OFFROAD2021 emissions inventory and include construction equipment and commercial equipment.

d. Household consumer product use based on the emissions factors in the CalEEMod Users Guide Version 2022.1.1.13.

<sup>35</sup> Bay Area Air Quality Management District, 2016, May. Planning Healthy Places.  
[https://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php\\_may20\\_2016-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/planning-healthy-places/php_may20_2016-pdf.pdf?la=en),  
accessed May 25, 2023.

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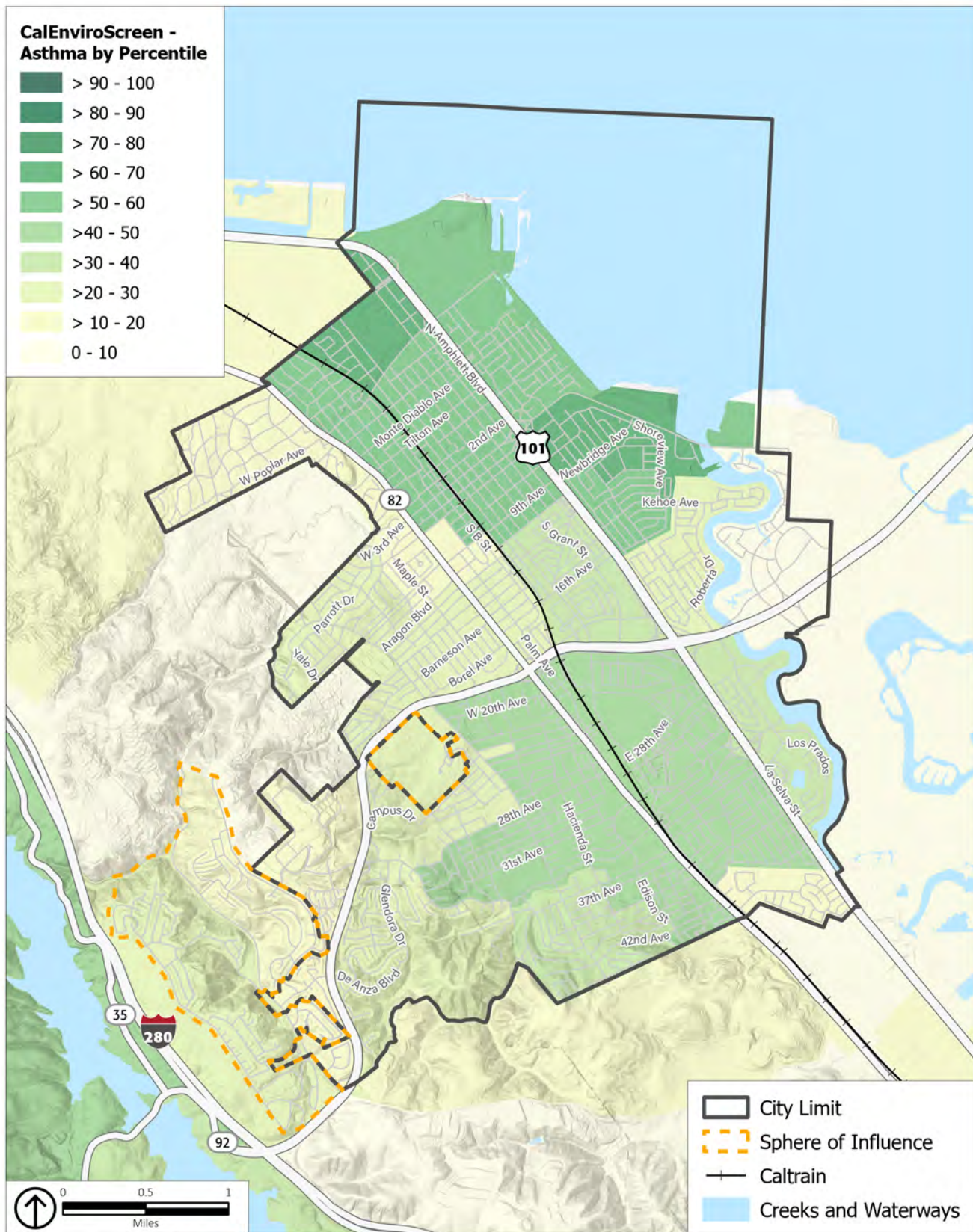


Source: CalOEHHA, 2021; PlaceWorks, 2023.

Figure 4.2-4  
CES4 Indicator – Cumulative Score by Percentile



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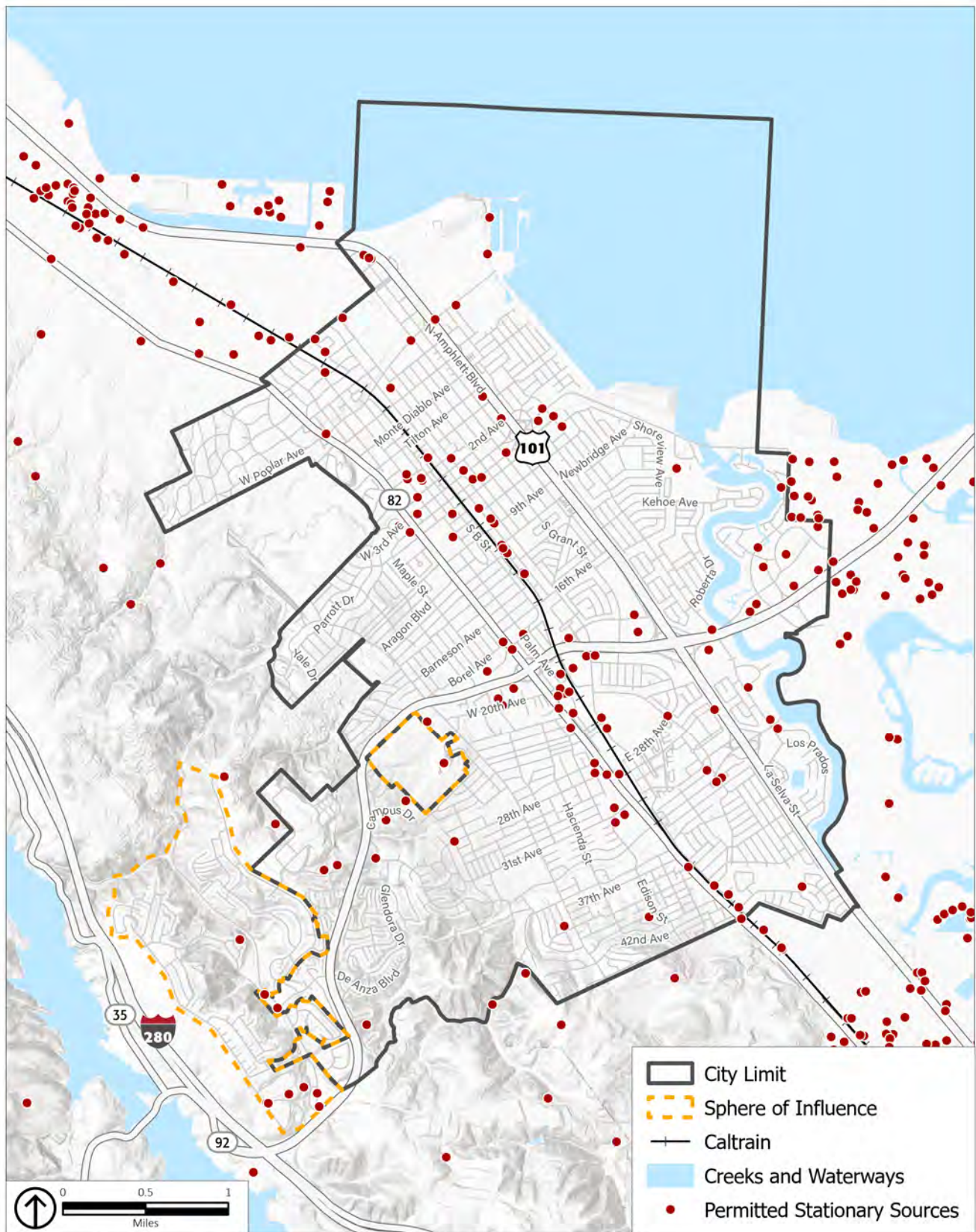


Source: CalOEHHA, 2021; PlaceWorks, 2023.

Figure 4.2-5  
CES4 Indicator – Asthma by Percentile



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Source: BAAQMD, 2021; PlaceWorks, 2023.

Figure 4.2-6  
San Mateo Siting Recommendations

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### *Stationary Sources*

Stationary sources of air pollution—including complex sources such as metal smelting, wastewater treatment plants, and refineries as well as smaller facilities such as diesel generators, gasoline dispensing facilities (GDFs or gas stations), and boilers—are regulated and subject to permit conditions established by BAAQMD.<sup>36</sup> Stationary sources in the EIR Study Area are shown on Figure 4.2-6.

### *Odors*

The city of San Mateo has a wastewater treatment plant that has the potential to generate odors. Odors are also associated with certain manufacturing processes and with some commercial operations (restaurants, etc.) that may be located near residential uses. Nuisance odors are regulated under BAAQMD Regulation 7, Odorous Substances, and Regulation 1, Rule 1-301, Public Nuisance. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

## 4.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant air quality impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
5. In combination with past, present, and reasonably foreseeable projects, result in cumulative air quality impacts in the area.

### **BAAQMD Plan-Level Significance Criteria**

The BAAQMD *CEQA Air Quality Guidelines* were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, greenhouse gas emissions, and environmental justice.

In June 2010, BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. These thresholds are designed to establish the level at which BAAQMD believed air

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<sup>36</sup> Permitted facilities are mapped by BAAQMD and can be found at: <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65>, accessed May 25, 2023.



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pollution emissions would cause significant environmental impacts under CEQA. BAAQMD published a new version of the Guidelines dated April 2023.<sup>37</sup> This latest version of the BAAQMD CEQA Guidelines was used to prepare the analysis in this EIR.

### *Clean Air Plan Consistency*

Under its plan-level review criteria, which apply to long-range plans such as the proposed project, BAAQMD recommends a consistency evaluation of the plan with its current Air Quality Plan Management (AQMP) control measures. BAAQMD considers a plan to be consistent with the applicable AQMP, which is currently the 2017 Clean Air Plan, if it is consistent with below considerations:

- Does the project support the primary goals of the AQMP?
- Does the project include applicable control measures from the AQMP?
- Does the project disrupt or hinder implementation of any AQMP control measure?
- Does the project result in VMT growth that is equal to or less than the projected population growth?

### *Criteria Air Pollutant Emissions and Precursors*

### Regional Significance Criteria

BAAQMD's regional significance criteria for projects that exceed the screening thresholds are shown in Table 4.2-6, *BAAQMD Regional (Mass Emissions) Criteria Air Pollutant Significance Thresholds*. Criteria for both the construction and operational phases of the project are shown.

**TABLE 4.2-6 BAAQMD REGIONAL (MASS EMISSIONS) CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS**

Air Pollutant	Construction Phase	Operational Phase	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (Tons/year)
<b>Project-Level</b>			
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (Exhaust)	82	15
PM <sub>2.5</sub>	54 (Exhaust)	54	10
PM <sub>10</sub> and PM <sub>2.5</sub> Fugitive Dust	Best Management Practices	None	None
<b>Plan-Level</b>			
All Criteria Air Pollutants	No Net Increase		

Source: Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

While the proposed General Plan is a local long-range plan, the land use pattern envisioned by the proposed General Plan has regional implications, such as interjurisdictional transportation behavior and jobs-to-housing ratios; therefore, it would have a less-than-significant impact related to air quality if it

<sup>37</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

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demonstrates “no net increase” in criteria air pollutants and risks and hazards. To demonstrate no net increase, BAAQMD’s Guidelines require two comparative analyses for the projected future emissions:

- **Scenario 1:** Project to Existing Conditions (base-to-future-year comparison). Compare the existing (base year) emissions with projected future year emissions plus the regional plan’s emissions (base year/regional plan comparison).
- **Scenario 2:** Project to Future No Project Conditions (future baseline comparison). Compare projected future year emissions with projected future year emissions plus the regional plan’s emissions (no regional plan/regional plan comparison). This scenario isolates changes in emissions due solely to the project since both the scenarios consider emissions reductions from federal and state regulations.

If both comparative analyses demonstrate no net increase in emissions, the air quality and GHG impacts of the regional plan would be less than significant.

### *Health Effects of Criteria Air Pollutants*

If projects exceed the emissions in Table 4.2-6, emissions would cumulatively contribute to the nonattainment status and would contribute in elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants.

However, for projects that exceed the emissions in Table 4.2-6, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the SFBAAB would be affected by the health effects cited above. BAAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SFBAAB and at the present time, it has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5<sup>th</sup> 502, Case No. S21978 (Friant Ranch).

Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National AAQS and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the EPA, the air districts prepare air quality management plans that detail regional programs to attain the AAQS. However, if a project within the Plan Area exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time the attainment standards are met in the SFBAAB.

## *Receptor Exposure to Pollutant Concentrations*

### Local Carbon Monoxide Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). Under a plan-level review, BAAQMD does not require an evaluation of CO hotspots. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS for CO emissions, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, BAAQMD does not require a CO hotspot analysis if the following criteria are met:<sup>38</sup>

- The project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

### *Community Risk and Hazards*

BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and PM<sub>2.5</sub> because emissions of these pollutants can have significant health impacts at the local level. The proposed project would generate TACs and PM<sub>2.5</sub> during construction activities that could elevate concentrations of air pollutants at the nearby receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for project operations. BAAQMD has adopted screening tables for air toxics evaluation during construction.<sup>39</sup> Construction-related TAC and PM<sub>2.5</sub> impacts are addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site and on-site receptors, as applicable.<sup>40,41</sup>

<sup>38</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

<sup>39</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

<sup>40</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

<sup>41</sup> Bay Area Air Quality Management District, 2017, January 5. Air Quality Standards and Attainment Status. <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status#thirteen>, accessed May 25, 2023.

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### Community Risk and Hazards: Project

Project-level emissions of TACs or PM<sub>2.5</sub> from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk in the absence of a qualified community risk reduction plan:

- An excess (i.e., increased) cancer risk level of more than 10 in one million
- Noncancer (i.e., chronic or acute) hazard index greater than 1.0
- An incremental increase of greater than 0.3 micrograms per cubic meter (µg/m<sup>3</sup>) annual average PM<sub>2.5</sub><sup>42</sup>

### Community Risk and Hazards: Cumulative

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulatively considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the project, exceeds any of the following in the absence of a qualified community risk reduction plan:

- An excess cancer risk level of more than 100 in one million (from all sources)
- Chronic noncancer hazard index (from all local sources) greater than 10.0
- 0.8 µg/m<sup>3</sup> annual average PM<sub>2.5</sub> (from all local sources)<sup>43</sup>

In February 2015, the Office of Environmental Health Hazard Assessment (OEHHA) adopted new health risk assessment guidance that includes several efforts to be more protective of children's health. These updated procedures include the use of age sensitivity factors to account for the higher sensitivity of infants and young children to cancer causing chemicals, and age-specific breathing rate.<sup>44</sup>

### *Odor Impacts*

BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property. Under BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance. BAAQMD has established odor

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<sup>42</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

<sup>43</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

<sup>44</sup> California Office of Environmental Health Hazard Assessment, February 2015, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, accessed June 1, 2023.

screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.<sup>45</sup> For a plan-level analysis, BAAQMD requires:

- Potential existing and planned locations of odor sources to be identified.
- Policies to reduce odors.

## 4.2.3 IMPACT DISCUSSION

### Methodology

#### *Emissions Quantification*

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the proposed project. BAAQMD has published CEQA Guidelines that provides local governments with guidance for analyzing and mitigating air quality impacts and was used in this analysis. The EIR Study Area's criteria air pollutant emissions inventory includes the following sectors:

- **Transportation:** Transportation emissions forecasts were modeled using emission rates from CARB's EMFAC2021, version 1.0.2 web database. Model runs were based on daily VMT data provided by Kittelson and Associates, Inc. (see Appendix D, *Noise Data*, and Chapter 4.15, *Transportation*, of this Draft EIR) adjusted for the population and employment in the EIR Study Area in year 2019. The VMT provided includes the full trip length for land uses in the EIR Study Area. Consistent with CARB's methodology within the Climate Change Scoping Plan Measure Documentation Supplement, daily VMT was multiplied by 347 days per year to account for reduced traffic on weekends and holidays to determine annual emissions.
- **Energy:** Energy use for residential and nonresidential land uses in the EIR Study Area were modeled using natural gas data provided by PG&E and PCE. Residential energy and non-residential energy forecasts are adjusted for increases in housing units and employment, respectively.
- **Off-Road Equipment:** Emission rates from CARB's OFFROAD2021, version 1.0.1, web database were used to estimate criteria air pollutant emissions from light commercial and construction equipment in the EIR Study Area. OFFROAD2021 is a database of equipment use and associated emissions for each county compiled by CARB. Emissions were compiled using OFFROAD2021 for the County of San Mateo for year 2019. In order to determine the percentage of emissions attributable to the city, light commercial equipment is estimated based on employment for the City of San Mateo as a percentage of San Mateo County. Construction equipment use is estimated based on service population for the City of San Mateo and County of San Mateo from data compiled by the US Census. The light commercial equipment emissions forecast is adjusted for changes in employment in the EIR Study Area. It is assumed that construction emissions for the forecast year would be similar to historical levels. Annual emissions are derived by multiplying daily emissions by 365 days. Agricultural

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<sup>45</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.



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equipment was not evaluated in the EIR Study Area since there were no agricultural land use designations.

- **Area Sources:** Area sources are based on the emission factors from the CalEEMod Users Guide for emissions generated from use of household consumer products and cleaning supplies.

### *Impacts of the Environment on a Project*

BAAQMD's CEQA Guidelines include methodology for jurisdictions wanting to evaluate the potential quantitative impacts from placing sensitive receptors proximate to major air pollutant sources as part of individual projects. For assessing community risk and hazards for siting a new receptor, sources within a 1,000-foot radius of a project site are typically considered. Sources are defined as freeways, high volume roadways, large distribution centers, and permitted sources. For plan-level impact determination such as this EIR on the proposed General Plan, the analysis is limited to whether the plan has policies or overlay zones to reduce impacts.<sup>46</sup>

Buildout under the proposed project could result in siting sensitive uses (e.g., residential) near sources of emissions (e.g., freeways, industrial uses, etc.). Developing new sensitive land uses near sources of emissions could expose people potential air quality-related impacts. However, the purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project, as determined by the California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4<sup>th</sup> 369 (Case No. S213478). Thus, CEQA does not require analysis of the potential environmental effects from siting sensitive receptors near existing sources, and this type of analysis is not provided in the impact discussion below.

While it is generally not within the purview of CEQA to analyze impacts of the environment on a project, the proposed General Plan includes policy guidance which would ensure priority of the health of San Mateo City's residents through enforcement of the municipal code and incorporation of design features to minimize air quality impacts and to achieve appropriate health standards. The following General Plan 2040 goals, policies, and actions would serve to protect air quality in the EIR Study Area:

- **Goal COS-4:** Goals, policies, and actions focused on equity priority communities can be found throughout the General Plan. The Land Use Element also includes goals and policies on environmental justice under Goal LU-8. All San Mateo residents should have the ability to breathe safe, clean air.
  - **Policy COS 4.1: Air Quality Thresholds.** Use thresholds of significance that match or are more stringent than the air quality thresholds of significance identified in the current Bay Area Air Quality Management District (BAAQMD) Air Quality Guidelines when evaluating air quality impacts of projects.

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<sup>46</sup> Bay Area Air Quality Management District, April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

- **Policy COS 4.2: Health Risk Assessment.** Require new development not exempt from CEQA that includes sensitive receptors to prepare Health Risk Assessments. Identify appropriate mitigation, based on the findings of the Health Risk Assessment, to reduce health risks from major sources of toxic air pollution, such as high-volume roadways, stationary sources, permitted sources from BAAQMD, and warehousing.
- **Policy COS 4.3: BAAQMD Planning for Healthy Places.** Require new development to adhere to BAAQMD's Planning for Healthy Places guidance when local conditions warrant.
- **Policy COS 4.4: Activity Near Sensitive Receptors.** Comply with State regulations that prohibit nonessential idling of vehicles near sensitive receptors, such as the requirements outlined in Title 13 of the California Code of Regulations (CCR).
- **Policy COS 4.5: Odors.** When proposed development generating odors is proposed near residences or sensitive receptors, either adequate buffer distances shall be provided (based on recommendations and requirements of the California Air Resources Board [CARB] and BAAQMD), or filters or other equipment/solutions shall be provided to reduce the potential exposure to acceptable levels. Potential mitigation associated with this policy requirement will be coordinated with any required permit conditions from BAAQMD.

When new residential or other sensitive receptors are proposed near existing sources of odors, either adequate buffer distances shall be provided (based on recommendations and requirements of CARB and BAAQMD), or filters or other equipment/solutions shall be provided to reduce the potential exposure to acceptable levels.

- **Policy COS 4.6: Toxic Air Contaminants.** Require that when new development that would be a source of toxic air contaminants (TACs) is proposed near residences or sensitive receptors, either adequate buffer distances shall be provided (based on recommendations and requirements of CARB and BAAQMD), or filters or other equipment/solutions shall be provided to reduce the potential exposure to acceptable levels.

When new residential or other sensitive receptors are proposed near existing sources of TACs, either adequate buffer distances shall be provided (based on recommendations and requirements of CARB and BAAQMD), or filters or other equipment/solutions shall be provided to the source to reduce the potential exposure to acceptable levels.

- **Policy COS 4.7: Air Quality Construction Impacts.** Require new construction and grading activities to mitigate air quality impacts generated during construction activities in compliance with BAAQMD's regulations and guidelines on construction activity impacts.
- **Policy COS 4.8: Truck Facilities.** Require new development, when applicable, to provide adequate truck parking loading space, and generators for refrigerated trucks to prevent idling during truck operation.
- **Policy COS 4.9: Air Pollution Exposure.** For new development that is located within 1,000 feet from US Highway 101 and State Route 92, require installation of enhanced ventilation systems and other strategies to protect people from respiratory, heart, and other health effects associated with breathing polluted air.

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- **Action COS 4.10: Air Quality Improvement.** Support and partner with Bay Area Air Quality Management District (BAAQMD) in monitoring, education, permitting, enforcement, grants programs, or other efforts to improve air quality issues and health outcomes for all.
- **Action COS 4.11: Clean Air Refuges.** Develop and implement a plan to provide clean air refuges during times when outdoor air quality is unhealthy. Explore the feasibility of participating in State grant programs to fund retrofits of ventilation systems at public buildings to provide refuge for residents during periods of unhealthy air quality caused by excessive smoke from wildfires.

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<b>AQ-1</b>	<b>The proposed project would not conflict with or obstruct implementation of the BAAQMD Clean Air Plan.</b>
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The following describes potential air quality impacts of consistency with the AQMP from the implementation of the proposed project.

### Bay Area Clean Air Plan – Criteria Air Pollutants and Precursors

The proposed project plays an important role in local agency project review by linking local planning and individual projects to the *2017 Clean Air Plan*. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration at an early enough stage to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to clean air goals in the Bay Area.

BAAQMD requires a consistency evaluation of a proposed plan with the current AQMP control measures. As previously discussed, BAAQMD considers project consistency with the AQMP in accordance with the following:

- Does the project support the primary goals of the AQP?
- Does the project include applicable control measures from the AQP?
- Does the project disrupt or hinder implementation of any AQP control measures?

In addition, long-range plans must demonstrate consistency with the projected growth rate of vehicle activity in VMT or vehicle trips under the plan, as follows:

- Is the project VMT or vehicle trip increase less than or equal to the projected population increase?

### Bay Area Air Quality Management District 2017 Clean Air Plan Goals

The primary goals of the 2017 Clean Air Plan are to attain the State and federal AAQS, reduce population exposure and protect public health in the Bay Area, reduce GHG emissions and protect the climate. Furthermore, the 2017 Clean Air Plan lays the groundwork for reducing GHG emissions in the Bay Area to meet the State's 2030 GHG reduction target and the long-term GHG reduction goals.

#### *Attain Air Quality Standards*

BAAQMD's 2017 Clean Air Plan strategy is based on regional population and employment projections in the Bay Area compiled by ABAG, which are based in part on cities' General Plan land use designations.

These demographic projections are incorporated into Plan Bay Area. Demographic trends incorporated into Plan Bay Area determine VMT in the Bay Area, which BAAQMD uses to forecast future air quality trends. The 2017 Clean Air Plan is based on data used in Plan Bay Area 2040. The SFBAAB is currently designated a nonattainment area for  $O_3$ ,  $PM_{2.5}$ , and  $PM_{10}$  (State AAQS only).

As discussed in Chapter 4.13, *Population and Housing*, of this Draft EIR, the expected buildout under the proposed project would exceed the Plan Bay Area 2040 regional growth projections for housing by 32 percent and population by 25 percent.<sup>47</sup> However, the proposed project would result in an overall decrease in VMT per service population compared to existing conditions (see Table 4.2-9, *Comparison of the Change in Population and VMT in the EIR Study Area*). The Land Use (LU) Element of the proposed General Plan also provides goals, policies, and actions that would serve to minimize potential adverse impacts related to growth in the EIR Study Area (see impact discussion POP-1 in Chapter 4.13). Therefore, implementation of the proposed project would not introduce a substantial unplanned growth in population in the EIR Study Area and potential future development would primarily occur in ten General Plan Land Use Study Areas (including current buildings that are aging, vacant, or not maintained).

As discussed in greater detail under impact discussion AQ-2, individual development projects facilitated by the proposed project would be required to undergo their own respective CEQA environmental review. In determining whether an individual development project would be considered a project under CEQA that would have potentially significant impacts on local and regional air quality, including consideration of an individual development project's contribution to an existing or forecasted air quality violation, BAAQMD recommends project-level significance thresholds for criteria pollutants and ozone precursors. Therefore, the population projections of the proposed project would be consistent with regional projections. The emissions resulting from potential future development associated with the proposed project are included in the BAAQMD projections, and future development accommodated under the proposed project would not hinder BAAQMD's ability to attain the California or National AAQS. Accordingly, this impact would be *less than significant*.

### *Reduce Population Exposure and Protect Public Health*

Future development and activities under the proposed project could result in new sources of TACs and  $PM_{2.5}$ . Stationary sources, including smaller stationary sources associated with residential development (e.g., emergency generators and boilers), are subject to review by BAAQMD as part of the permitting process. Adherence to the BAAQMD permitting regulations would ensure that new stationary sources of TACs do not expose populations to significant health risk. Mobile sources of air toxics (e.g., truck idling) are not regulated directly by BAAQMD. However, residential development associated with the proposed project would not generate substantial truck traffic or idling. Furthermore, individual development projects would be required to achieve the project-level risk thresholds established by BAAQMD to ensure the sensitive receptor impact resulting from the subject development project would be *less than significant*.

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<sup>47</sup> It should be noted that Plan Bay Area 2040 projections have been superseded by Plan Bay Area 2050 projections, but ABAG/MTC has not made updated projections available at the jurisdiction level, so it is not possible to compare projected growth under the proposed General Plan to Plan Bay Area 2050 projections.

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### *Reduce GHG Emissions and Protect the Climate*

Consistency of the proposed project with State, regional, and local plans adopted for the purpose of reducing GHG emissions are discussed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR. Future development allowed by the proposed project would be required to adhere to statewide measures that have been adopted to achieve the GHG reduction targets of SB 32 and AB 1279. The proposed project is consistent with regional strategies for infill development identified in Plan Bay Area 2050 and the proposed CAP update does not include changes to the strategies in the City's 2020 CAP. Moreover, as discussed under impact discussion GHG-1 in Chapter 4.7, the proposed General Plan and accompanying CAP update would meet legislative GHG emission reduction targets established under SB 32 and AB 1279. Therefore, the proposed project is consistent with the goal of the *2017 Clean Air Plan* to reduce GHG emissions and protect the climate, and the impact would be *less than significant*.

### *2017 Clean Air Plan Control Measures*

Table 4.2-7, *Control Measures from the BAAQMD 2017 Clean Air Plan*, identifies the control measures included in the *2017 Clean Air Plan* that are required by BAAQMD to reduce emissions for a wide range of both stationary and mobile sources. As shown in Table 4.2-7, the proposed project would not conflict with the *2017 Clean Air Plan* and would not hinder BAAQMD from implementing the control measures in the *2017 Clean Air Plan*. Accordingly, this impact would be *less than significant*.

**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
Stationary Source Control Measures	<ul style="list-style-type: none"> <li>▪ SS 1 – Fluid Catalytic Cracking in Refineries</li> <li>▪ SS 2 – Equipment Leaks</li> <li>▪ SS 3 – Cooling Towers</li> <li>▪ SS 4 – Refinery Flares</li> <li>▪ SS 5 – Sulfur Recovery Units</li> <li>▪ SS 6 – Refinery Fuel Gas</li> <li>▪ SS 7 – Sulfuric Acid Plants</li> <li>▪ SS 8 – Sulfur Dioxide from Coke Calcining</li> <li>▪ SS 9 – Enhanced NSR Enforcement for Changes in Crude Slate</li> <li>▪ SS 10 – Petroleum Refining Emissions Tracking</li> <li>▪ SS 11 – Petroleum Refining Facility-Wide Emission Limits</li> <li>▪ SS 12 – Petroleum Refining Climate Impacts Limit</li> <li>▪ SS 13 – Oil and Gas Production, Processing and Storage</li> <li>▪ SS 14 – Methane from Capped Wells</li> <li>▪ SS 15 – Natural Gas Processing and Distribution</li> <li>▪ SS 16 – Basin-Wide Methane Strategy</li> <li>▪ SS 17 – GHG BACT Threshold</li> <li>▪ SS 18 – Basin-Wide Combustion Strategy</li> <li>▪ SS 19 – Portland Cement</li> </ul>	<p>Stationary and area sources are regulated directly by BAAQMD; therefore, as the implementing agency, new stationary and area sources within the EIR Study Area would be required to comply with BAAQMD regulations. BAAQMD routinely adopts/revises rules or regulations to implement the stationary source (SS) control measures to reduce stationary source emissions. Based on the new development under the proposed project, implementation of the proposed project would not hinder the ability of BAAQMD to implement these SS control measures. Major stationary source are more commonly associated with industrial manufacturing or warehousing. However, BAAQMD and the City have existing regulations in place to ensure potential future development under the proposed project would not conflict with the applicable SS control measures. Non-residential land uses may generate small quantities of stationary source emissions during project operation (e.g., emergency generators, dry cleaners, and gasoline dispensing facilities); however, these small-quantity generators would require review by BAAQMD for permitted sources of air toxics, which would ensure consistency with the 2017 Clean Air Plan.</p> <p>The proposed project involves residential and commercial uses that would not include major</p>



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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
	<ul style="list-style-type: none"> <li>▪ SS 20 – Air Toxics Risk Cap and Reduction from Existing Facilities</li> <li>▪ SS 21 – New Source Review for Toxics</li> <li>▪ SS 22 – Stationary Gas Turbines</li> <li>▪ SS 23 – Biogas Flares</li> <li>▪ SS 24 – Sulfur Content Limits of Liquid Fuels</li> <li>▪ SS 25 – Coatings, Solvents, Lubricants, Sealants and Adhesives</li> <li>▪ SS 26 – Surface Prep and Cleaning Solvent</li> <li>▪ SS 27 – Digital Printing</li> <li>▪ SS 28 – LPG, Propane, Butane</li> <li>▪ SS 29 – Asphaltic Concrete</li> <li>▪ SS 30 – Residential Fan Type Furnaces</li> <li>▪ SS 31 – General Particulate Matter Emission Limitation</li> <li>▪ SS 32 – Emergency Backup Generators</li> <li>▪ SS 33 – Commercial Cooking Equipment</li> <li>▪ SS 34 – Wood Smoke</li> <li>▪ SS 35 – PM from Bulk Material Storage, Handling and Transport, Including Coke and Coal</li> <li>▪ SS 36 – PM from Trackout</li> <li>▪ SS 37 – PM from Asphalt Operations</li> <li>▪ SS 38 – Fugitive Dust</li> <li>▪ SS 39 – Enhanced Air Quality Monitoring</li> <li>▪ SS 40 – Odors</li> </ul>	stationary sources of emissions. Boilers and emergency generators for multi-family residential products would be required to follow BAAQMD's permitting requirements.
Transportation Control Measures	<ul style="list-style-type: none"> <li>▪ TR 1 – Clean Air Teleworking Initiative</li> <li>▪ TR 2 – Trip Reduction Programs</li> <li>▪ TR 3 – Local and Regional Bus Service</li> <li>▪ TR 4 – Local and Regional Rail Service</li> <li>▪ TR 5 – Transit Efficiency and Use</li> <li>▪ TR 6 – Freeway and Arterial Operations</li> <li>▪ TR 7 – Safe Routes to Schools and Safe Routes to Transit</li> <li>▪ TR 8 – Ridesharing, Last-Mile Connection</li> <li>▪ TR 9 – Bicycle and Pedestrian Access and Facilities</li> <li>▪ TR 10 – Land Use Strategies</li> <li>▪ TR 11 – Value Pricing</li> <li>▪ TR 12 – Smart Driving</li> <li>▪ TR 13 – Parking Policies</li> <li>▪ TR 14 – Cars and Light Trucks</li> <li>▪ TR 15 – Public Outreach and Education</li> <li>▪ TR 16 – Indirect Source Review</li> <li>▪ TR 17 – Planes</li> <li>▪ TR 18 – Goods Movement</li> <li>▪ TR 19 – Medium and Heavy Duty Trucks</li> </ul>	<p>Transportation (TR) control measures are strategies to reduce vehicle trips, vehicle use, VMT, vehicle idling, and traffic congestion for the purpose of reducing motor vehicle emissions. Although most of the TR control measures are implemented at the regional level—that is, by MTC or Caltrans—the 2017 Clean Air Plan relies on local communities to assist with implementation of some measures.</p> <p>The development under the proposed project would be reviewed based on the policies in the proposed General Plan. The Circulation (C), Community Design and Historic Resources (CD), Conservation, Open Space, and Recreation (COS), and Land Use (LU) Elements contain the following goals and policies to expand the pedestrian and bicycle network:</p> <p><b>Goal C-1:</b> Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.</p>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
	<ul style="list-style-type: none"> <li>TR 20 – Ocean Going Vessels</li> <li>TR 21 – Commercial Harbor Craft</li> <li>TR 22 – Construction, Freight and Farming Equipment</li> <li>TR 23 – Lawn and Garden Equipment</li> </ul>	<ul style="list-style-type: none"> <li><b>Policy C-1.4: Prioritize Pedestrian and Bicycle Mobility Needs.</b> Prioritize local pedestrian and bicycle projects that enhance mobility, connectivity, and safety when designing roadway and intersection improvements.</li> </ul> <p><b>Goal C-3:</b> Build and maintain a safe, connected, and equitable pedestrian network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.</p> <ul style="list-style-type: none"> <li><b>Policy C-3.1: Pedestrian Network.</b> Create and maintain a safe, walkable environment in San Mateo to increase the number of pedestrians. Maintain an updated recommended pedestrian network for implementation. Encourage “superblock” or similar design in certain nodes of the city, such as the downtown, that allows vehicle access at the periphery and limits cut-through vehicles to create pedestrian-focused, car-light spaces.</li> <li><b>Policy C-3.2: Pedestrian Enhancements with New Development.</b> Require new development projects to provide sidewalks and pedestrian ramps and to repair or replace damaged sidewalks, in addition to right-of-way improvements identified in adopted City master plans. Encourage new developments to include pedestrian-oriented design to facilitate pedestrian path of travel.</li> <li><b>Policy C-3.3: Right-of-Way Improvements.</b> Require new developments to construct or contribute to improvements that enhance the pedestrian experience, including human-scale lighting, streetscaping, and accessible sidewalks adjacent to the site.</li> </ul> <p><b>Goal C-4:</b> Build and maintain a safe, connected, and equitable bicycle and micromobility network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.</p> <ul style="list-style-type: none"> <li><b>Policy C-4.1: Bicycle Network.</b> Create and maintain a bicycle-friendly environment in San Mateo and increase the number of people who choose to bicycle.</li> <li><b>Policy C-4.2: Bicycle Master Plan.</b> Maintain an updated recommended bicycle network for implementation in the adopted Bicycle Master Plan and related City plans.</li> <li><b>Policy C-4.6: Bicycle Improvements.</b> Require new developments to construct or contribute to improvements that enhance the cyclist experience, including bicycle lanes.</li> </ul>

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TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		<ul style="list-style-type: none"> <li>▪ <b>Policy C-7.4: Bicycle Parking.</b> Require the provision of bicycle parking as part of new private developments.</li> </ul> <p><b>Goal CD-8:</b> Improve the visual and architectural character, livability, and vitality of mixed-use and commercial areas.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy CD-8.2: Human Scale Design.</b> Cultivate pedestrian activity in commercial and mixed-use areas by providing adequate sidewalk widths, activating ground-floor street façades with active uses, windows, plantings, and awnings, using high-quality construction materials, and including human-scale details and architectural features.</li> </ul> <p><b>Goal COS-7:</b> Provide the appropriate mix of parks and facilities that balances the needs of active and passive facilities, allows formal and informal uses, is accessible for all residents, and meets existing and future recreation needs.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy COS-7.5: Active Use Facilities.</b> Provide sufficient active-use facilities to support current needs and future trends, including, but not limited to, multiuse athletic turf areas; court games; action sports, e.g., bicycling; and a system of pedestrian and bicycle trails that will provide interconnectivity between parks.</li> </ul> <p><b>Goal LU-3:</b> Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy LU-3.8: Workplaces.</b> Develop office buildings and business parks to facilitate transit, pedestrian, and bicycle commutes. Provide compact development, mixed uses, and connectivity to transit to reduce vehicle miles traveled (VMT).</li> </ul>
Energy and Climate Control Measures	<ul style="list-style-type: none"> <li>▪ EN 1 – Decarbonize Electricity Production</li> <li>▪ EN 2 – Renewable Energy Decrease Electricity Demand</li> </ul>	<p>The energy and climate (EN) control measures are intended to reduce energy use as a means to reducing adverse air quality emissions.</p> <p>The development under the proposed project would be reviewed based on the policies in the proposed General Plan. The proposed Community Design and Historic Resources (CD), Public Services and Facilities (PSF), and Land Use (LU) Elements contain the following goals and policies that align with the City's goals to meet the State's carbon neutrality initiatives:</p> <p><b>Goal CD-6:</b> Develop and maintain an attractive urban fabric that reflects San Mateo's unique visual and</p>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<p>architectural character.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy CD-6.3: Sustainable Design.</b> Encourage integration of sustainable design features and elements into the design of new buildings, including locating and orienting buildings to access solar exposure, preserving mature vegetation to the extent feasible, and using green building materials.</li> </ul> <p><b>Goal PSF-4:</b> Promote the development of a clean energy supply, energy-efficient technology, and telecommunications facilities that benefit all members of the community.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy PSF-4.1: Clean Energy.</b> Support the advancement of a carbon-neutral energy supply.</li> <li>▪ <b>Policy PSF-4.2: Energy Conservation.</b> Support efforts to reduce per-capita energy use.</li> <li>▪ <b>Policy PSF-4.3: Building Electrification.</b> Require electrification for new building stock and reduce fossil fuel usage for existing building stock at the time of building alteration.</li> <li>▪ <b>Policy PSF-4.4: Energy Resilience.</b> Require new development projects to incorporate energy-efficiency measures, electric equipment, solar energy systems, and battery storage into their projects (Building Integrated Photo-Voltaic/BIPV) and encourage existing development to incorporate solar energy systems and battery storage.</li> </ul> <p><b>Goal LU-10:</b> Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy LU-10.2: Decarbonized Building Stock.</b> Eliminate the use of fossil fuels as an energy source in all new building construction and reduce the use of fossil fuels as an energy source in the existing building stock at the time of building alteration through requirements for all-electric construction.</li> </ul> <p>Furthermore, new developments accommodated under the proposed project would be built to comply with the latest Building Energy Efficiency Standards and CALGreen standards. Therefore, implementation of the proposed project would not conflict with these EN control measures.</p>
Buildings Control Measures	<ul style="list-style-type: none"> <li>▪ BL 1 – Green Buildings</li> <li>▪ BL 2 – Decarbonize Buildings</li> <li>▪ BL 3 – Market-Based Solutions</li> <li>▪ BL 4 – Urban Heat Island Mitigation</li> </ul>	<p>The buildings (BL) control measures focus on working with local governments to facilitate adoption of best GHG emissions control practices and policies.</p> <p>The development under the proposed project would be reviewed based on the policies in the proposed General Plan. The Community Design and Historic</p>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<p>Resources (CD) and Land Use (LU) Elements contain the following goals and policies to promote energy efficiency and sustainability:</p> <p><b>Goal CD-6:</b> Develop and maintain an attractive urban fabric that reflects San Mateo’s unique visual and architectural character.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy CD-6.3: Sustainable Design.</b> Encourage integration of sustainable design features and elements into the design of new buildings, including locating and orienting buildings to access solar exposure, preserving mature vegetation to the extent feasible, and using green building materials.</li> </ul> <p><b>Goal LU-10:</b> Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy LU-10.2: Decarbonized Building Stock.</b> Eliminate the use of fossil fuels as an energy source in all new building construction and reduce the use of fossil fuels as an energy source in the existing building stock at the time of building alteration through requirements for all-electric construction.</li> </ul> <p>In addition, as stated, new developments accommodated under the proposed project would be built to comply with the latest Building Energy Efficiency Standards and CALGreen standards. Thus, the proposed project would not conflict with these BL control measures.</p>
Agriculture Control Measures	<ul style="list-style-type: none"> <li>▪ AG 1 – Agricultural Guidance and Leadership</li> <li>▪ AG 2 – Dairy Digesters</li> <li>▪ AG 3 – Enteric Fermentation</li> <li>▪ AG 4 – Livestock Waste</li> </ul>	<p>Agricultural practices in the Bay Area accounts for a small portion, roughly 1.5 percent, of the Bay Area GHG emissions inventory. The GHGs from agriculture include methane and nitrous oxide, in addition to carbon dioxide. While the Agriculture (AG) control measures target larger scale farming practices that are not included in the proposed project, the potential development under the proposed project do not constitute any sites which currently host commercial agricultural operations.</p> <p>Therefore, implementation of the proposed project would not conflict with these AG control measures.</p>
Natural and Working Lands Control Measures	<ul style="list-style-type: none"> <li>▪ NW 1 – Carbon Sequestration in Rangelands</li> <li>▪ NW 2 – Urban Tree Planting</li> <li>▪ NW 3 – Carbon Sequestration in Wetlands</li> </ul>	<p>The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands.</p> <p>The development under the proposed project would be reviewed based on the policies in the proposed General Plan. The Conservation, Open Space, and Recreation (COS) and Community Design and Historic</p>



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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<p>Resources (CD) Elements contain the following goals and policies to promote carbon sequestration:</p> <p><b>Goal COS-1:</b> Protect and enhance the City's natural resource areas that provide plant and animal habitat and benefit human and ecological health and resilience.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy COS-1.1: Sensitive Natural Communities.</b> Protect riparian habitat and other sensitive natural communities. When an opportunity arises, restore natural resources, including wetlands.</li> <li>▪ <b>Policy COS-1.8: Development Near Wetlands or Water.</b> Avoid wetlands development where feasible (as defined under California Environmental Quality Act [CEQA] Guidelines, Section 15364). Restrict or modify proposed development in areas that contain wetlands or waters to ensure the continued health and survival of special-status species and sensitive habitat areas. Development projects shall be designed to avoid impacts on sensitive resources, or to adequately mitigate impacts by providing on-site or off-site replacement at a higher ratio. Project design modification should include adequate avoidance measures, such as the use of setbacks, buffers, and water quality, drainage-control features, or other measures to ensure that no net loss of wetland acreage, function, water quality protection, and habitat value occurs. This may include the use of setbacks, buffers, and water quality, drainage-control features, or other measures to maintain existing habitat and hydrologic functions of retained wetlands and waters of the US.</li> </ul> <p><b>Goal COS-3:</b> Protect and improve San Mateo's creeks as valuable habitat and components of human and environmental health.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy COS-3.4: Groundwater Infiltration.</b> Protect existing open spaces, natural habitat, floodplains, and wetland areas that allow for percolation and infiltration of stormwater runoff to slow and reduce the flow of runoff and improve water quality and identify areas to protect when considering new development.</li> </ul> <p><b>Goal CD-3:</b> Protect heritage trees, street trees, and tree stands and maintain the health and condition of San Mateo's urban forest.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy CD-3.2: Replacement Planting.</b> Require appropriate replacement planting or payment of an in-lieu fee when protected trees on public or private property are removed.</li> </ul>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<ul style="list-style-type: none"> <li>▪ <b>Policy CD-3.7: Street Tree Equity.</b> Plant new street trees to increase the tree canopy throughout the city, especially in gateway areas and in tree-deficient neighborhoods; encourage neighborhood participation in tree planting programs.</li> </ul>
Water Control Measures	<ul style="list-style-type: none"> <li>▪ WR 1 – Limit GHGs from publicly owned treatment works (POTWs)</li> <li>▪ WR 2 – Support Water Conservation</li> </ul>	<p>The 2017 Clean Air Plan includes measures to reduce water use.</p> <p>The development under the proposed project would be reviewed based on the policies in the proposed General Plan. The Land Use (LU) and Conservation, Open Space, and Recreation (COS) Elements contain the following goals and policies to increase plumbing water efficiency and reduce landscape water use:</p> <p><b>Goal LU-10:</b> Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy LU-10.1: Effects of Climate Change.</b> Consider the effects of climate change in updating or amending the General Plan, disaster planning, City projects, infrastructure planning, future policies, and long-term strategies. Recognize potential climate change consequences, such as sea level rise, flooding, higher groundwater, less availability of drinking water, hotter temperatures, increased wildfire risk, and changing air quality. Prioritize protecting equity priority communities from the disproportionate burden of climate hazards, including against risks of displacement and challenges in rebuilding after major incidents.</li> </ul> <p><b>Goal COS-8:</b> Plan and develop well-designed parks and recreation facilities compatible with surrounding uses that promote accessibility, efficient use, and practical maintenance.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy COS-8.7: Environmentally Sound Park Operations.</b> Use native and drought-tolerant plant species, efficient irrigation systems, reclaimed water, and sustainable management practices. Expand efforts to improve recycling opportunities in all parks and implement trash-reduction measures, especially during large community events.</li> </ul>
Super-GHG Control Measures	<ul style="list-style-type: none"> <li>▪ SL 1 – Short-Lived Climate Pollutants</li> <li>▪ SL 2 – Guidance for Local Planners</li> <li>▪ SL 3 – GHG Monitoring and Emissions Measurements Network</li> </ul>	<p>Super-GHGs include methane, black carbon and fluorinated gases. The compounds are sometimes referred to as short-lived climate pollutants because their lifetime in the atmosphere is generally fairly short. Measures to reduce super GHGs are addressed on a sector-by-sector basis in the 2017 Clean Air Plan. Through ongoing implementation of the City's 2020 CAP, the City will continue to reduce</p>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		<p>local GHG emissions, meet State, regional, and local reduction targets, which would ensure implementation of the proposed project would not conflict with these SL control measures.</p> <p>The development under the proposed project would be reviewed based on the policies in the proposed General Plan. The Public Services and Facilities (PSF) and Land Use (LU) Elements contain the following goals and policies for encouraging use of renewable energy.</p> <p><b>Goal PSF-4:</b> Promote the development of a clean energy supply, energy-efficient technology, and telecommunications facilities that benefit all members of the community.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy PSF-4.1: Clean Energy.</b> Support the advancement of a carbon-neutral energy supply.</li> <li>▪ <b>Policy PSF-4.4: Energy Resilience.</b> Require new development projects to incorporate energy-efficiency measures, electric equipment, solar energy systems, and battery storage into their projects (Building Integrated Photo-Voltaic/BIPV) and encourage existing development to incorporate solar energy systems and battery storage.</li> <li>▪ <b>Policy PSF-4.6: Renewable Energy Neighborhood Microgrids.</b> Encourage the establishment of renewable energy neighborhood microgrids to support resilience.</li> </ul> <p><b>Goal LU-10:</b> Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.</p> <ul style="list-style-type: none"> <li>▪ <b>Policy LU-10.2: Decarbonized Building Stock.</b> Eliminate the use of fossil fuels as an energy source in all new building construction and reduce the use of fossil fuels as an energy source in the existing building stock at the time of building alteration through requirements for all-electric construction.</li> </ul>
Further Study Control Measures	<ul style="list-style-type: none"> <li>▪ FSM SS 1 – Internal Combustion Engines</li> <li>▪ FSM SS 2 – Boilers, Steam Generator and Process Heaters</li> <li>▪ FSM SS 3 – GHG Reductions from Non Cap-and Trade Sources</li> <li>▪ FSM SS 4 – Methane Exemptions from Wastewater Regulation</li> <li>▪ FSM SS 5 – Controlling start-up, shutdown, maintenance, and malfunction (SSMM) Emissions</li> <li>▪ FSM SS 6 – Carbon Pollution Fee</li> </ul>	<p>The majority of the further study control measures apply to sources regulated directly by BAAQMD. Because BAAQMD is the implementing agency, new and existing sources of stationary and area sources in the EIR Study Area would be required to comply with these additional further study control measures in the 2017 Clean Air Plan.</p>

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**TABLE 4.2-7 CONTROL MEASURES FROM THE BAAQMD 2017 CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
	<ul style="list-style-type: none"> <li>FSM SS 7 – Vanishing Oils and Rust Inhibitors</li> <li>FSM SS 8 – Dryers, Ovens and Kilns</li> <li>FSM SS 9 – Omnibus Rulemaking to Achieve Continuous Improvement</li> <li>FSM BL 1 – Space Heating</li> <li>FSM AG 1 – Wineries</li> </ul>	

Source: Bay Area Air Quality Management District, April 19, 2017, *Final 2017 Clean Air Plan, Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*, [https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf?la=en](https://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 May 25, 2023.

*Regional Growth Projections for VMT and Population*

As discussed above, one of the criteria for determining consistent with the current AQMP is comparing the Planning Area’s VMT growth with its population growth over the same planning horizon. Kittelson and Associates analyzed VMT for the proposed project to estimate the weekday citywide VMT generation for the proposed project in the Baseline Year (2019) No Project and Cumulative Year (2040) with Project scenarios. (See Chapter 4.15, *Transportation*, of this Draft EIR for a more detailed VMT discussion.)

Table 4.2-8, *EIR Study Area Projected Generated Total VMT*, displays the VMT estimates resulting from implementation of the proposed project, based on Kittelson and Associates’ analysis.

**TABLE 4.2-8 EIR STUDY AREA PROJECT GENERATED TOTAL VMT**

Category	Baseline Year (2019)	Cumulative Year (2040)	Net Change
Total VMT <sup>1</sup>	2,742,688	3,535,141	792,453

Notes:

<sup>1</sup> The above estimates are drawn directly from the Kittelson and Associates VMT Analysis (2023) prepared for the proposed project, which assumes a total 2040 buildout of 61,139 households. The proposed project assumes a total 2040 buildout of 61,140 households, as presented in Table 3-1, *Proposed General Plan 2040 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR.

Source: Kittelson and Associates, 2023.

Table 4.2-9, *Comparison of the Change in Population and VMT in the EIR Study Area*, displays the Baseline Year (2019) No Project and Cumulative Year (2040) with Project estimates.

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**TABLE 4.2-9 COMPARISON OF THE CHANGE IN POPULATION AND VMT IN THE EIR STUDY AREA**

Category	Base Year (2019)	Cumulative Year (2040)	Change from Existing	
			Change	%
Service Population <sup>a</sup>	170,460	239,400	68,940	40.4%
Daily VMT <sup>b</sup>	3,918,221	5,108,862	1,190,641	30.4%
VMT/Service Population <sup>c</sup>	22.99	21.34	-1.65	-7.2%

Notes:

a. Service Population accounts for total population and jobs. See Table 3-1, Proposed General Plan 2040 Buildout Projections in the EIR Study Area, in Chapter 3, *Project Description*, of this Draft EIR.

b. Kittelson and Associates, 2023.

c. Daily per Capita VMT estimates are identified by dividing the Daily VMT estimates by the city population for the corresponding year. It should be noted that the Daily per capita VMT estimates above do not necessarily reflect VMT by each resident as the total Daily VMT estimates include nonresidential VMT.

Source: Kittelson and Associates, PlaceWorks, 2023.

Consistency with BAAQMD's AQMP requires that the VMT increase be less than or equal to the projected population increase from the proposed project (e.g., generate the same or less VMT per population). However, because the proposed project accommodates both residential and nonresidential growth, a better indicator of how efficiently the City is growing can be made by comparing the increase in VMT to the increase in service population (e.g., generate the same or less VMT per service population). This approach is similar to the efficiency metrics for GHG emissions, which consider the total service population when calculating project efficiency.

VMT estimates based on data provided by Kittelson and Associates were calculated for the EIR Study Area. As shown in Table 4.2-9, implementation of the proposed project would result in an increase for daily VMT by 1,190,641 vehicle miles per day in the EIR Study Area (about 30 percent increase) but lead to a lower VMT per service population than existing conditions (approximately 7 percent decrease). Thus, the proposed project would be consistent with the goals of the 2017 *Clean Air Plan* and this impact would be *less than significant*.

## Environmental Justice

BAAQMD's CEQA Air Quality Guidelines also require an analysis of consistency of the proposed project with applicable Community Emission Reduction Plans (CERPs) and local environmental justice policies. Environmentally overburdened, underserved, and economically distressed communities may be subject to a higher risk of pollutant-related health effects than the general population because they may be exposed to higher pollutant concentrations; they may experience a larger health impact at a given pollutant concentration; or they may be adversely affected by lower pollutant concentrations than the general population. The most critical air pollutant affecting health in the SFBAAB is PM<sub>2.5</sub>, which includes DPM. The burden of breathing unhealthy air is often disproportionately borne by low-income



communities and communities of color, many of which are situated closer to busy highways, ports, factories, and other pollution sources.<sup>48</sup>

The Land Use (LU) Element of the proposed General Plan integrates goals, policies, and actions that seek to lessen the environmental burden on disadvantaged populations. The process to develop environmental justice policy guidance involved extensive discussions and many meetings with community members and other stakeholders who live in, work in, or engage with communities that are most impacted by environmental justice issues to ensure the plan directly responds to the specific needs of Equity Priority Communities. Furthermore, the City has a Diversity, Equity, and Inclusion Committee to establish equity and inclusivity values within the community.<sup>49</sup>

The Land Use (LU) Element of the proposed General Plan includes broad policy guidance for environmental justice to help address vulnerabilities in Equity Priority Communities. In addition to the proposed General Plan goal, policies, and actions listed under the subheading “Impacts of the Environment on a Project” above, the following General Plan 2040 goals, policies, and actions would serve to reduce and/or avoid environmental effects on vulnerable populations:

- **Goal LU-8:** Support the equitable health and well-being of all neighborhoods in San Mateo and all members of the San Mateo community by improving conditions in equity priority communities.
  - **Policy LU 8.1: Prioritizing Community Health.** Continue to support the physical and mental health and well-being in equity priority communities by prioritizing public safety, resolving land use conflicts and incompatible uses that pose risks to health or safety, remediating contamination, and enforcing building code standards.
  - **Action LU 8.2: Collaborations for Community Health.** Develop intentional, strategic, and mutually beneficial relationships with organizations engaged in improving health and well-being, reducing environmental health disparities, expanding access to affordable quality healthcare and mental healthcare, and mitigating negative environmental health hazards. Encourage greater emphasis on expanding or improving health services, including mental health services, in equity priority communities.
  - **Action LU 8.3: Health Disparities.** Coordinate with the San Mateo County Public Health Department to promote healthier communities through education, prevention, intervention programs, and other activities that address health disparities and inequities that exist in San Mateo.
  - **Action LU 8.4: City Investment.** Use funds collected by the park impact fee to invest in programs and public improvements that connect residents with opportunities to increase their physical activity and improve their physical and mental health, especially in equity priority communities

<sup>48</sup> Bay Area Air Quality Management District, 2022, *Best Practices for Centering Environmental Justice, Health, and Equity*, <https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-2-environmental-justicefinal-pdf.pdf?la=en>, accessed June 1, 2023.

<sup>49</sup> City of San Mateo, Diversity, Equity, & Inclusion, <https://www.cityofsanmateo.org/4422/Diversity-Equity-Inclusion>, accessed May 9, 2023.

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with higher risk of negative public health outcomes. Identify new funding sources for programs and public improvements, if needed.

- **Policy LU 8.5: Community Preservation.** Prevent displacement in equity priority communities by protecting tenants, helping homeowners remain in place, and funding affordable housing.
- **Policy LU 8.6: Safe and Sanitary Homes.** Encourage homes and neighborhoods that are free of environmental health hazards.
- **Policy LU 8.7: Access to Parks and Recreation.** Provide attractive, comfortable, and safe pedestrian and cyclist access to public parks and recreational facilities in and near equity priority communities.
- **Action LU 8.8: Streetscape and Safety Improvements.** Work with residents in equity priority communities to identify sidewalk, lighting, landscaping, and roadway improvements needed to improve routes to parks, schools, recreation facilities, and other destinations within the community. Prioritize investments to address health disparities in equity priority communities in the annual Capital Improvement Program.
- **Action LU 8.9: Equity Priority Community Mapping.** Regularly update the map identifying equity priority communities with data from CalEnviroScreen or other sources, including information from community members.
- **Action LU 8.12: Neighborhood Beautification.** Support and promote neighborhood clean-up and beautification initiatives in equity priority communities, including in partnership with neighborhood organizations.
- **Policy LU 8.13: Locally Grown Food.** Increase access to fresh food by allowing and encouraging local food production, micro agriculture, edible landscapes, rooftop gardens, community gardens, and urban farms, and by distributing information about community-supported agriculture programs that provide affordable access to fresh food.
- **Policy LU 8.14: Retail Food Sources.** Strive to ensure that all households in San Mateo, including those in equity priority communities, have access to retail sources of affordable healthy food, including organic options, such as full-service grocery stores, specialty food markets, farmers markets and/or community gardens, and convenience stores with fresh food options, by working to retain existing retail sources and attract new ones.
- **Action LU 8.15: Healthy Food Access.** Support the work of San Mateo County Health and other local partners to:
  - Continue and expand the ability to use the Electronic Benefit Transfer (EBT) program at farmers' markets and other sources of healthy food.
  - Implement programs to encourage markets and convenience stores to stock fresh produce and other healthy foods.
  - Encourage restaurants to enlist restaurants in the CalFresh Restaurant Meals Program, which allows people at a high risk of chronic hunger to use CalFresh benefits to buy prepared meals at participating restaurants.

- Continue to provide and expand the subsidized senior lunch program at the San Mateo Senior Center and the Congregate Nutrition Program at the King Center Community Center.
- **Action LU 8.16: Urban Agriculture.** Develop City regulations that encourage urban agriculture, community gardens, and farm stands, as appropriate.

As shown above, the proposed project considers measures to reduce emissions and improve community health within Overburdened and AB 617 communities consistent with BAAQMD's environmental justice goals. Thus, the proposed project would be consistent with BAAQMD's environmental justice goals and the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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AQ-2	Construction of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard.
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The proposed General Plan guides growth within the EIR Study Area by designating land uses in the proposed land use diagram and through implementation of its goals, policies, and actions. New development would increase air pollutant emissions in the EIR Study Area and contribute to the overall emissions inventory in the SFBAAB. A discussion of health effects associated with air pollutant emissions generated by operational activities is included in Section 4.2.1.1, *Air Pollutants of Concern*.

## Construction

The proposed project would not directly result in construction of any development or infrastructure; however, future development under the proposed project would result in short-term construction-related criteria pollutant emissions that have the potential to have an adverse effect on air quality. Short-term criteria pollutant emissions would occur during demolition, site preparation, grading, building construction, paving, and architectural coating activities associated with individual development projects. ROG and NO<sub>x</sub> emissions are primarily associated with gasoline and diesel equipment exhaust and the application of architectural coatings. Fugitive dust emissions (PM<sub>10</sub> and PM<sub>2.5</sub>) are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT by construction vehicles on- and off-site. Typical construction equipment associated with development and redevelopment projects includes dozers, graders, excavators, loaders, and trucks.

As discussed in Chapter 4.6, *Geology and Soils*, of this Draft EIR, the city has outcrops of serpentinite rock, which when broken or crushed can release asbestos fibers. Asbestos is a term used for several types of naturally occurring fibrous materials that was classified as a known human carcinogen and

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inhalation of asbestos may result in the development of lung cancer or mesothelioma.<sup>50</sup> When serpentinite and ultrafamic rocks containing asbestos are broken or crushed, asbestos fibers may become airborne, causing potential air quality and human health hazards.<sup>51</sup> Subsequently, CARB has regulated the amount of asbestos in crushed serpentinite and ultrafamic rock in surfacing applications and has adopted a new rule requiring best practices dust control measures for activities that disturb rock and soil containing naturally occurring asbestos to address the health concerns associated with exposure to asbestos. The Air District has also adopted these Airborne Toxic Control Measures in their Naturally Occurring Asbestos Program to minimize the release of asbestos fibers during activities involving the handling of asbestos. Furthermore, the US EPA requires specific work practices to control the release of asbestos fibers relating to renovation/demolition activities.

Although the exact coverage, location, or duration of future construction projects is unknown at the time of preparation of this Draft EIR, future development activities would generally entail demolition, site preparation, grading, building construction, paving, and painting. Since the EIR Study Area is largely built out, many new projects in the EIR Study Area will likely require the demolition of existing structures to make room for newer ones. Fugitive dust emissions would typically be greatest during building demolition, site preparation, and grading activities due to the disturbance of soils and transport of material. NO<sub>x</sub> emissions would also result from the combustion of diesel fuels used to power off-road heavy-duty vehicles and equipment (e.g., backhoes, bulldozers, excavators). The types and quantities of equipment, as well as duration of construction activities, would be dependent on project-specific conditions. Larger developments would require more equipment over a longer timeframe than that required for redevelopment of a single, residential home.

BAAQMD does not recommend plan-level thresholds of significance for construction emissions; however, BAAQMD does maintain and recommend project-level thresholds of significance for construction emissions that future development projects facilitated by the proposed project would be subject to. In addition, BAAQMD's CEQA Air Quality Guidelines identify and recommend a series of "Basic" measures to control and reduce construction-related fugitive dust emissions. For all project, BAAQMD recommends implementation of eight Basic Construction Measures to reduce construction fugitive dust and determines a project's fugitive dust impacts during construction to be less than significant if the following Basic Construction Measures are incorporated into project construction:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.

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<sup>50</sup> California Department of Conservation, Naturally-Occurring Asbestos in California. [https://www.conservation.ca.gov/cgs/minerals/hazardous\\_minerals/asbestos](https://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos), accessed March 3, 2023.

<sup>51</sup> California Air Resources Board, Naturally Occurring Asbestos. <https://ww2.arb.ca.gov/our-work/programs/naturally-occurring-asbestos>, accessed March 3, 2023.

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- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to the sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Prior to the commencement of construction activities, individual project proponents shall post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

As previously discussed, a criterion identified by BAAQMD for determining plan-level significance with respect to criteria air pollutants and ozone precursors is determining project consistency with the current AQMP control measures, which are intended to ensure the region's achievement and maintenance of attainment of federal and State AAQS. As the SFBAAB is currently designated as a nonattainment area for PM, mitigation would be required to ensure that individual development projects facilitated by the proposed project would result in less-than-significant construction fugitive dust impacts. Therefore, this impact is considered to be *significant* without mitigation.

**Impact AQ-2:** Construction of development projects that could occur from implementation of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds and cumulatively contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.

**Mitigation Measure AQ-2:** Prior to discretionary approval by the City for development projects subject to CEQA (California Environmental Quality Act) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with Bay Area Air Quality Management District (BAAQMD) methodology for assessing air quality impacts identified in BAAQMD's *CEQA Air Quality Guidelines*. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the City shall require feasible mitigation measures to reduce air quality emissions. Measures shall require implementation of the BAAQMD Best Management Practices for construction-related fugitive dust emissions, including:

- Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) at least twice daily or as often as needed to control dust emissions.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.



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- All roadways, driveways, sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seedling or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compact layer of wood chips, mulch, or gravel.
- Prior to the commencement of construction activities, individual project proponents shall post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

Measures shall be incorporated into appropriate construction documents (e.g., construction management plans) and shall be verified by the City.

**Significance with Mitigation:** Significant and unavoidable. Mitigation Measure AQ-2 contains BAAQMD's "Basic Construction Mitigation Measures Recommended for All Proposed Projects" in the bullet points listed above and contained in BAAQMD's 2023 CEQA Air Quality Guidelines, which are recommended by BAAQMD to ensure construction fugitive dust emissions are less than significant. As such, fugitive dust emissions would be reduced with implementation of Mitigation Measure AQ-2. While Mitigation Measure AQ-2 has the potential to reduce construction exhaust emissions, potential future development projects under the proposed project (individually or cumulatively) could still exceed the BAAQMD significance thresholds for construction. Therefore, implementation of the proposed project could result in significant construction-related regional air impacts from construction equipment exhaust. However, this finding would not preclude a finding of less than significant at the project level.

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AQ-3	Operation of the proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard.
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### Operation (Long-term Emissions)

Operational (long-term) activities associated with potential future development under the proposed project could generate a substantial increase in long-term criteria air pollutant emissions from existing conditions that could exceed BAAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SFBAAB.

Implementation of the proposed project would result in direct and indirect criteria air pollutant emissions from transportation, energy (e.g., natural gas use), and area sources (e.g., aerosols and landscaping equipment). Mobile-source criteria air pollutant emissions are based on the traffic analysis

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conducted by Kittelson and Associates for this EIR. The emissions forecast for the EIR Study Area under the proposed project compared to existing conditions (with 2040 emissions rates) is shown in Table 4.2-10, *Proposed Project Criteria Air Pollutant Emissions Forecast (Scenario 1, Comparison to Existing Conditions)*. This is “Scenario 1” as required by BAAQMD and explained under the “BAAQMD Significance Criteria” subheading in Section 4.2.2, *Standards of Significance*.

As shown in Table 4.2-10, implementation of the proposed project would result in an increase in criteria air pollutant emissions from existing conditions. This increase is based on the difference between existing land uses and land uses associated with development allowed under the proposed project, as well as an estimate of population and employment in the EIR Study Area in the 2040 horizon year. Therefore, development associated with the proposed project would generate operational (long-term) air pollutant emissions that exceed BAAQMD’s regional significance thresholds for VOC and NO<sub>x</sub> in 2040. Emissions of VOC and NO<sub>x</sub> that exceed the BAAQMD regional threshold would cumulatively contribute to the O<sub>3</sub> nonattainment designation of the SFBAAB. Emissions of NO<sub>x</sub> that exceed BAAQMD’s regional significance thresholds would cumulatively contribute to the O<sub>3</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) nonattainment designations of the SFBAAB.

**Table 4.2-10 Proposed Project Criteria Air Pollutant Emissions Forecast (Scenario 1, Comparison to Existing Conditions)**

Year	Criteria Air Pollutants (Tons/Year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Existing Land Uses – Year 2040</b>				
On-Road Transportation	12	61	32	11
Energy	6	120	9	9
Off-road Equipment	71	45	2	1
Consumer Products	310	—	—	—
<b>Total Existing Land Uses (tons/year)</b>	<b>400</b>	<b>226</b>	<b>42</b>	<b>21</b>
<b>Proposed Land Use Plan – Year 2040 Total Buildout</b>				
On-Road Transportation	16	80	41	14
Energy	9	168	13	13
Off-road Equipment	100	57	2	2
Consumer Products	515	—	—	—
<b>Proposed Land Uses Total (tons/year)</b>	<b>640</b>	<b>305</b>	<b>56</b>	<b>28</b>
<b>Change in Emissions from Existing Land Uses (Year 2040)</b>				
On-Road Transportation	4	19	10	3
Energy	3	49	4	4
Off-road Equipment	29	12	1	0
Consumer Products	205	—	—	—
<b>Net Change from Existing Land Uses (Year 2040)</b>	<b>240</b>	<b>79</b>	<b>14</b>	<b>7</b>
BAAQMD Threshold (Tons/Year)	10	10	15	10
<b>Exceeds BAAQMD Threshold?</b>	<b>Yes</b>	<b>Yes</b>	No	No

Note: Numbers may not sum due to rounding.

Source: PlaceWorks, 2023. See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

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As shown in Table 4.2-11, *Net Change in Regional Criteria Air Pollutant Emissions Forecast (Scenario 2, Comparison to Future No Project Conditions)*, compared to existing baseline year conditions, emissions of NO<sub>x</sub> are projected to decrease from current levels despite growth associated with the proposed project. However, operational (long-term) emissions would remain above the BAAQMD significance thresholds due to the increase in VOCs from household consumer products used in residential development associated with the proposed project. This is “Scenario 2” as required by BAAQMD and explained under the “BAAQMD Significance Criteria” subheading in Section 4.2.2, *Standards of Significance*.

**Table 4.2-11 Net Change in Regional Criteria Air Pollutant Emissions Forecast (Scenario 2, Comparison to Future No Project Conditions)**

Year	Criteria Air Pollutants (Tons/Year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Existing Land Uses – Existing Baseline</b>				
On-Road Transportation	45	337	35	15
Energy	6	120	9	9
Off-road Equipment	71	45	2	1
Consumer Products	310	—	—	—
<b>Existing Baseline Land Uses Total</b>	<b>433</b>	<b>501</b>	<b>46</b>	<b>25</b>
<b>Proposed Land Use Plan – Year 2040 Total Buildout</b>				
On-Road Transportation	16	80	41	14
Energy	9	168	13	13
Off-road Equipment	100	57	2	2
Consumer Products	515	—	—	—
<b>Proposed Land Uses Total</b>	<b>640</b>	<b>305</b>	<b>56</b>	<b>28</b>
<b>Change in Emissions from Existing Baseline</b>				
On-Road Transportation	-29	-257	6	-1
Energy	3	49	4	4
Off-road Equipment	29	12	1	<1
Consumer Products	205	—	—	—
<b>Net Change from Existing Baseline</b>	<b>207</b>	<b>-196</b>	<b>10</b>	<b>3</b>
BAAQMD Threshold (Tons/Year)	10	10	15	10
<b>Exceeds BAAQMD Threshold?</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>

Note: Numbers may not add up due to rounding.

Source: PlaceWorks, 2022. See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

Compared to existing baseline year conditions, emissions of NO<sub>x</sub> are projected to decrease from current levels despite growth associated with the proposed project. However, operational (long-term) emissions would remain above the BAAQMD significance thresholds due to the increase in VOCs from consumer products used in residential development associated with the proposed project. Although compliance with applicable proposed General Plan goals, policies, and actions would contribute towards minimizing

long-term emissions, implementation of the proposed project would still exceed the BAAQMD significance thresholds for operation. Therefore, implementation of the proposed project could result in *significant* long-term regional air quality impacts.

#### *Consistency with AQMP Control Measures*

As previously mentioned, BAAQMD's plan-level guidance does not require an emissions inventory of criteria air pollutants for plan-level analysis; however, BAAQMD recommends that one method used for determining plan-level impact significance is to analyze the proposed plan's consistency with the current AQMP control measures. As discussed in Table 4.2-7, the proposed project would be consistent with the applicable 2017 Clean Air Plan control measures. As such, the proposed project would be consistent with the current AQMP control measures, and this impact would be *less than significant*.

#### *Proposed Plan VMT and Population Growth*

As previously mentioned, BAAQMD's plan-level guidance does not require an emissions inventory of criteria air pollutants for plan-level analysis; however, BAAQMD recommends that the second method for determining plan-level impact significance is to analyze the proposed plan's projected VMT growth versus its projected population growth from existing conditions through its planning horizon year (2040). If a proposed plan's projected VMT growth outpaces its projected population growth, then that proposed plan would result in a cumulatively considerable net increase in criteria pollutants, and this impact would be potentially significant. As discussed in impact discussion AQ-1, the daily VMT growth facilitated by the proposed project would constitute an approximately 30.4 percent growth through 2040 while population growth facilitated by the proposed project would constitute an approximately 48.2 percent growth through 2040. Therefore, the forecasted VMT growth would not outpace the forecasted population growth facilitated by the proposed project. As such, this impact would be *less than significant*.

While growth within the EIR Study Area would cumulatively contribute to operational (long-term) regional criteria air pollutant emissions impacts, the Circulation (C) Element of the proposed General Plan includes goals, policies, and actions that require local planning and development decisions to consider impacts from emissions and to reduce those emissions. In addition to the proposed General Plan goal, policies, and actions listed under the subheading "Impacts of the Environment on a Project" above, the following General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts related to operational phase (long-term) regional criteria air pollutant emissions:

- **Goal C-1:** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.
  - **Policy C 1.1: Sustainable Transportation.** Reduce greenhouse gas (GHG) emissions from transportation by increasing mode share options for sustainable travel modes, such as walking, bicycling, and public transit.
  - **Policy C 1.2: Complete Streets.** Apply complete streets design standards to future projects in the public right-of-way and on private property. Complete streets are streets designed to facilitate safe, comfortable, and efficient travel for all users regardless of age or ability or whether they

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are walking, bicycling, taking transit, or driving, and should include landscaping and shade trees as well as green streets stormwater infrastructure to reduce runoff and pollution.

- **Policy C 1.6: Transit-Oriented Development.** Increase access to transit and sustainable transportation options by encouraging high-density, mixed-use transit-oriented development near the City's Caltrain stations and transit corridors.
- **Action C 1.14: Transit-Oriented Development Pedestrian Access Plan.** Coordinate with interagency partners and community stakeholders to seek funding opportunities to design, construct, and build the priority projects identified in the Transit-Oriented Development Pedestrian Access Plan.
- **Goal C-2: Use transportation demand management (TDM) to reduce the number and length of single-occupancy vehicle trips through policy, zoning strategies, and targeted programs and incentives.**
  - **Policy C 2.1: TDM Requirements.** Require new or existing developments that meet specific size, capacity, and/or context conditions to implement TDM strategies.
  - **Action C 2.2: Implement TDM Ordinance.** Develop and implement a citywide TDM ordinance for new developments with tiered trip reduction and VMT reduction targets and monitoring that are consistent with the targets in their relevant area plans. Reduce parking requirements for projects that include TDM measures.
  - **Action C 2.5: Facilitate TDM Services.** Facilitate the provision of TDM services to employees and residents through development agreements, Transportation Management Associations, and coordination with regional partners.
  - **Action C 2.6: Travel to Schools.** Reduce school-related VMT and support student health by collaborating with private and public partners to increase the number of students walking or bicycling to school through expanded implementation of Safe Routes to School, including educating students and the community about the benefits of walking and bicycling and making physical improvements to streets and neighborhoods that make walking and bicycling safer. Prioritize school travel safety improvements in equity priority communities.
  - **Action C 2.7: New Development Shuttle Services.** Encourage new developments to provide shuttle services as an option to fulfill TDM requirements. Shuttles should serve activity centers, such as the College of San Mateo, Caltrain stations, downtown, the Hillsdale Shopping Center, or other areas and should accommodate the needs and schedules of all riders, including service workers.

While BAAQMD rules and the proposed General Plan goals, policies, and actions listed above may reduce operation-related (long-term) regional air quality impacts of individual projects accommodated under the proposed project to less than significant, due to the magnitude of development allowed, the projected cumulative emissions associated with future development projects would exceed the threshold. Therefore, implementation of the proposed project would significantly contribute to the nonattainment designations of the SFBAAB, resulting in a *significant* impact.



**Impact AQ-3:** Operation of development projects under the proposed project would generate operational emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>).

**Mitigation Measure AQ-3:** Prior to discretionary approval by the City for development projects subject to California Environmental Quality Act (CE) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project operational air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with Bay Area Air Quality Management District (BAAQMD) methodology in assessing air quality impacts identified in BAAQMD's current *CEQA Air Quality Guidelines* at the time that the project is considered.

If operation-related air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the City shall require the project applicant(s) to incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval or a mitigation monitoring and reporting plan adopted for the project as part of the project CEQA review. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:

- Implementing commute trip reduction programs.
- Unbundling residential parking costs from property costs.
- Expanding bikeway networks.
- Expanding transit network coverage or hours.
- Using cleaner-fueled vehicles.
- Exceeding the current Title 24 Building Envelope Energy Efficiency Standards.
- Establishing on-site renewable energy generation systems.
- Requiring all-electric buildings.
- Replacing gas-powered landscaping equipment with zero-emission alternatives.
- Implementing organics diversion programs.
- Expanding urban tree planting.

**Significance with Mitigation:** Significant and unavoidable. Buildout in accordance with the proposed project would generate long-term emissions that would exceed BAAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SFBAAB. Mitigation Measure AQ-3, in addition to the proposed General Plan goals, policies, and actions, would reduce air pollutant emissions to the extent practicable. The proposed General Plan goals, policies, and actions covering topics such as expansion of the pedestrian and bicycle networks, promotion of public and active transit, and support to increase building energy efficiency and energy conservation would also reduce criteria air pollutants within the EIR Study Area.

This EIR quantifies the increase in criteria air pollutants emissions in the EIR Study Area. However, at the programmatic level, it is not feasible to quantify the increase in TACs from stationary sources associated with the proposed project or meaningfully correlate how regional criteria air pollutant emissions above BAAQMD's significance thresholds correlate with basin wide health impacts.

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To determine cancer and noncancer health risk, the location, velocity of emissions, meteorology and topography of the area, and locations of receptors are equally important as model parameters as the quantity of TAC emissions. The white paper prepared by the Association of Environmental Professionals' Climate Change Committee, *We Can Model Regional Emissions, But Are the Results Meaningful for CEQA*, describes several of the challenges of quantifying local effects—particularly health risks—for large-scale, regional projects, and these are applicable to both criteria air pollutants and TACs. Similarly, the two amicus briefs filed by the air districts on the Friant Ranch case describe two positions regarding CEQA requirements, modeling feasibility, variables, and reliability of results for determining specific health risks associated with criteria air pollutants. The discussions also include the distinction between criteria air pollutant emissions and TACs with respect to health risks. The following summarizes major points about the infeasibility of assessing health risks of criteria air pollutant emissions and TACs associated with implementation of a general plan. The white paper and amicus briefs are provided in Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

To achieve and maintain air quality standards, BAAQMD has established numerical emission indicators of significance for regional and localized air quality impacts for both construction and operational phases of a local plan or project. The numerical emission indicators are based on the recognition that the air basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health. The thresholds represent the maximum emissions from a plan or project that are expected not to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard. By analyzing the plan's emissions against the thresholds, an EIR assesses whether these emissions directly contribute to any regional or local exceedances of the applicable ambient air quality standards and exposure levels.

BAAQMD currently does not have methodologies that would provide the City with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions. For criteria air pollutants, exceedance of the regional significance thresholds cannot be used to correlate a project to quantifiable health impacts unless emissions are sufficiently high to use a regional model. BAAQMD has not provided the methodology to assess the specific correlation between mass emissions generated and their effect on health (note Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR provides the San Joaquin Valley Air Pollution Control District's amicus brief, and South Coast Air Quality Management District's amicus brief).

Ozone concentrations depend on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of particulate matter and ozone can occur far from sources as a result of regional transport due to wind and topography (e.g., low-level jet stream). Photochemical modeling depends on all emission sources in the entire domain (i.e., modeling grid). Low resolution and spatial averaging produce "noise" and modeling errors that usually exceed individual source contributions. Because of the complexities of predicting ground-level ozone concentrations in relation to the National AAQS and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds.

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Current models used in CEQA air quality analyses are designed to estimate potential project construction and operation emissions for defined projects. The estimated emissions are compared to significance thresholds, which are keyed to reducing emissions to levels that will not interfere with the region's ability to attain the health-based standards. This serves to protect public health in the overall region, but there is currently no CEQA methodology to determine the impact of emissions (e.g., pounds per day) on future concentration levels (e.g., parts per million or micrograms per cubic meter) in specific geographic areas. CEQA thresholds, therefore, are not specifically tied to potential health outcomes in the region.

The EIR must provide an analysis that is understandable for decision making and public disclosure. Regional-scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation. Additionally, this type of analysis is not feasible at a general plan level because the location of emissions sources and quantity of emissions are not known. However, because cumulative development within the EIR Study Area would exceed the regional significance thresholds, this EIR finds that the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the SFBAAB.

In summary, as described above, implementation of the proposed project would generate emissions that would exceed BAAQMD's regional significance thresholds for VOC and NO<sub>x</sub>. The proposed General Plan includes goals, policies, and actions to reduce these long-term regional criteria air pollutant emissions. In addition, Mitigation Measure AQ-3 requires potential future development in San Mateo that is subject to CEQA (i.e., is a discretionary project) to prepare and submit a technical assessment evaluating potential project operational air quality impacts to the City of San Mateo for review and approval prior to project approval by the City. Where the technical assessment determines the BAAQMD -adopted thresholds are exceeded, the applicants for new development projects would be required to incorporate mitigation measures to reduce air pollutant emissions during operational activities. Due to the programmatic nature of this EIR, the impact is found to be significant and unavoidable. The identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent individual projects that meet applicable thresholds of significance. Due to the programmatic nature of the proposed project, no additional mitigating measures are available, and the impact is considered *significant and unavoidable*.

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### **AQ-4                      The proposed project would expose sensitive receptors to substantial pollutant concentrations.**

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Implementation of the proposed project could facilitate individual development projects that cause or contribute significantly to elevated pollutant concentration levels such that it would expose sensitive receptors to elevated pollutant concentrations. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects. Types of land uses that typically generate substantial quantities of TACs and PM<sub>2.5</sub> include industrial and manufacturing (stationary sources), warehousing land uses that have the potential to generate DPM from onsite equipment, and mobile sources (trucks). While these types of land uses are not prevalent in the EIR Study Area, nor are they anticipated to be introduced as part of

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the planned land uses envisioned in the proposed General Plan, commercial and retail uses that generate small and medium sized truck trips for deliveries could similarly generate localized substantial concentrations of TACs and PM<sub>2.5</sub>. Additionally, operation of new land uses consistent with the proposed project could generate new sources of criteria air pollutants and TACs in the EIR Study Area associated with CO hotspots. The following describes potential localized operational air quality impacts from implementation of the proposed project.

### Operational – CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO, called hotspots. These pockets have the potential to exceed the State 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. Since CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

An overarching goal of the Plan Bay Area 2050 is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle VMT and associated GHG emissions reductions. As described in impact discussion GHG-2 in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would be consistent with the overall goals of the Plan Bay Area 2050. Additionally, the proposed project would not hinder the capital improvements outlined in C/CAG's CMP. Thus, the proposed project would not conflict with the CMP.

Furthermore, under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact.<sup>52</sup> Implementation of the proposed project would result in hourly traffic increases at intersections across the EIR Study Area largely due to an increase in population and employment through 2040. According to traffic volume data provided by Kittelson and Associates, the intersection that would experience the greatest traffic volumes in 2040 would be El Camino Real at 17<sup>th</sup> Avenue, with an estimated 59,635 average daily trips (ADT). As an industry standard, the ADT are divided by 10 to identify the estimated peak hour traffic volumes at this intersection. Based on adjusting the ADT to identify the peak hour volumes, the intersection of El Camino Real at 17<sup>th</sup> Avenue would experience an estimated 5,963 peak hour vehicle trips. As such, the intersection that would experience the greatest peak hour trips in 2040 would be below BAAQMD's significance criteria of 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—and the proposed project would not be considered to generate a CO hotspot.

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<sup>52</sup> Bay Area Air Quality Management District (BAAQMD), April 2023, *California Environmental Quality Act: Air Quality Guidelines*, <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>, accessed May 8, 2023.

Furthermore, as described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed General Plan includes land use designations, goals, policies, and actions that will help reduce VMT and therefore reduce emissions from automobiles. Please see the impact discussion in Chapter 4.15 for a complete list of these goals, policies, and actions. Therefore, overall, the proposed project would not have the potential to substantially increase CO hotspots at intersections in the EIR Study Area and vicinity. Overall, these components of the proposed project would contribute to reducing congestion and associated emissions. Localized air quality impacts related to mobile-source emissions would therefore be *less than significant*.

## Operational Community Risk and Hazards

Common sources of TAC emissions are stationary sources (e.g., dry cleaners, diesel backup generators, and gasoline stations), which are subject to the BAAQMD permit requirements. Future development and activities under the proposed project could result in new sources of TACs and PM<sub>2.5</sub>. Stationary sources, including smaller stationary sources associated with residential development (e.g., emergency generators and boilers), are subject to review by BAAQMD as part of the permitting process. Adherence to the BAAQMD permitting regulations would ensure that new stationary sources of TACs do not expose populations to significant health risk. Mobile sources of air toxics (e.g., truck idling) are not regulated directly by BAAQMD. However, residential development associated with the proposed project would not generate substantial truck traffic or idling. Permitted stationary sources and nonpermitted sources are discussed in greater detail below.

### *Stationary (Permitted) Sources*

Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the proposed project would be expected to release TACs. TAC emissions generated by stationary and point sources of emissions within the SFBAAB are regulated and controlled by BAAQMD. Land uses that would require a permit from BAAQMD for emissions of TACs include chemical processing facilities, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. Emissions of TACs from stationary sources would be controlled by BAAQMD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under Regulation 2, New Source Review, as well as Regulation 11, Rule 18, *Reduction of Risk from Air Toxic Emissions at Existing Facilities*.

Review under New Source Review ensures that stationary source emissions (permitted sources) would be reduced or mitigated below the BAAQMD community risk and hazards thresholds. Though these sources would incrementally contribute to emissions in the EIR Study Area individually, they would be mitigated to the BAAQMD standards.

The proposed General Plan goal, policies, and actions listed under the subheading “Impacts of the Environment on a Project” above would serve to minimize potential adverse impacts on air quality by requiring new development to follow standards to reduce health risks from stationary sources.

Though the proposed General Plan includes a goal, policies, and actions to reduce exposure of sensitive receptors to pollution, and BAAQMD would ensure that on a project-by-project basis emission achieve



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their permit thresholds, emissions cannot be determined or modeled until specific development projects are proposed. Therefore, implementation of the proposed project may result in projects that emit TACs and PM<sub>2.5</sub> throughout the EIR Study Area and result in potentially *significant* localized air quality impacts.

### *Nonpermitted Sources*

TACs and PM<sub>2.5</sub> from mobile sources when operating at a property (e.g., truck idling) are regulated by statewide rules and regulations, not by BAAQMD, and have the potential to generate substantial concentrations of air pollutants. The primary mobile source of TACs within the EIR Study Area includes truck idling and use of off-road equipment.

While the land use pattern envisioned by the proposed General Plan does not involve a substantial increase in industrial or trucking facilities, new warehousing operations present the potential to generate substantial DPM and PM<sub>2.5</sub> emissions from off-road cargo-handling equipment use and truck idling. In addition, some warehousing and industrial facilities may include use of transport refrigeration units (TRUs) for cold storage. New land uses in the EIR Study Area that would be permitted under the proposed project that use trucks and TRUs could generate an increase in DPM that would contribute to cancer and noncancer health risk in the SFBAAB. Additionally, these types of facilities could also generate particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) that may cause an exceedance or contribute to the continuing exceedance of the federal and State AAQS. These new land uses could be near existing sensitive receptors. In addition, trucks would travel on regional transportation routes through the Bay Area, contributing to near-roadway DPM concentrations.

The proposed project would not result in an increase in Industrial land use and currently the industrial land use makes up less than 1 percent of the City Limits (0.8 percent). The majority of new development within the EIR Study Area is expected to be primarily concentrated around the three Caltrain stations (in the Downtown, Hayward Park, and Hillsdale Areas) and along El Camino Real. Until specific future development projects are proposed, the associated emissions and concentrations cannot be determined or modeled.

Proposed General Plan Policies COS 4.2, COS 4.3, COS 4.4, COS 4.6, COS 4.7, and COS 4.8 listed under the subheading “Impacts of the Environment on a Project” above would require the individual project applicants to prepare project-specific analysis of qualifying project and incorporate project-specific mitigation measures to reduce toxic air contaminants. If the results of a project-specific analysis show that the incremental cancer risk exceeds ten in one million (or the risk thresholds in effect at the time a project is considered) or six in one million in Equity Priority Communities, or the appropriate noncancer hazard index exceeds 1.0, or 0.3 µ/m<sup>3</sup> of PM<sub>2.5</sub>; or the thresholds as determined by BAAQMD at the time a project is considered, the applicant is required to mitigate the potential cancer and noncancer risks to an acceptable level.

Proposed General Plan Policies COS 4.4 and COS 4.8 would also reduce the exposure of sensitive receptors specifically in Equity Priority Communities and Overburdened Communities to TACs and PM<sub>2.5</sub>. These policies aim to limit truck idling within the EIR Study Area and overall support the BAAQMD rules to reduce emissions from mobile sources. The policies also include collaboration efforts with BAAQMD and the City to reevaluate permit processes, outline objectives and strategies for monitoring air

pollution, and monitor key health indicators to measure the success of the outcome of the proposed General Plan policies and implementation actions.

Though the proposed General Plan includes policies to reduce air pollutant emissions exposure within Impacted Communities, the proposed project could result in specific development projects that could emit TACs and PM<sub>2.5</sub>. The emissions associated with these facilities cannot be determined or modeled until specific development projects are proposed. Thus, implementation of the proposed project may result in projects that emit TACs and PM<sub>2.5</sub> in the vicinity of Equity Priority Communities and result in potentially significant localized air quality impacts. Therefore, without project-specific analysis health risk impacts from nonpermitted sources associated with development of industrial and commercial land uses are considered to be *significant*.

**Impact AQ-4:** Construction emissions associated with development under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District's project-level and cumulative significance thresholds.

**Mitigation Measure AQ-4:** Prior to discretionary approval by the City, project applicants for new industrial or warehousing development projects that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes) or Overburdened Community, as measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City for review and approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District (BAAQMD). If the HRA shows that the cumulative and project-level incremental cancer risk, noncancer hazard index, and/or PM<sub>2.5</sub> exceeds the respective threshold, as established by BAAQMD (all areas of the City and Sphere of Influence) and project-level risk of 6.0 in Equity Priority Communities at the time a project is considered, the project applicant will be required to identify best available control technologies for toxics (T-BACTs) and appropriate enforcement mechanisms, and demonstrate that they are capable of reducing potential cancer, noncancer risks, and PM<sub>2.5</sub> to an acceptable level. T-BACTs may include but are not limited to:

- Restricting idling on-site beyond Air Toxic Control Measures idling restrictions
- Electrifying warehousing docks
- Requiring use of newer equipment
- Requiring near-zero or zero-emission trucks for a portion of the vehicle fleet based on opening year.
- Truck Electric Vehicle (EV) Capable trailer spaces.
- Restricting off-site truck travel through the creation of truck routes.

T-BACTs identified in the HRA shall be included as part of the conditions of approval or a mitigation monitoring and reporting plan adopted for the project as part of the project CEQA review.

**Significance with Mitigation:** Significant and unavoidable. Development allowed by the proposed project could result in new sources of TACs or PM<sub>2.5</sub> near existing or planned sensitive receptors. Review of development projects by BAAQMD for permitted sources of air toxics (e.g., industrial

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facilities, dry cleaners, and gas stations) in addition to proposed General Plan goals, policies, and actions would ensure that health risks are minimized. Individual development projects would be required to achieve the incremental risk thresholds established by BAAQMD, and TAC and PM<sub>2.5</sub> project-level impacts would be less than significant. However, these projects could contribute to significant cumulative risk in the Bay Area that could affect sensitive populations and Equity Priority Communities. As a result, the proposed project's contribution to cumulative health risk is considered significant and unavoidable.

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AQ-5	The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
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### Construction

While odors could be generated during future construction activities associated with development and activities under the proposed project, the proposed project would not directly result in construction of any development project. Identification of potential impacts to odor receptors resulting from construction-generated odors, such as equipment exhaust, would require project-specific information for future individual land use development projects that is not currently known. Nonetheless, odors are regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*. Compliance with BAAQMD Regulation 1 would ensure that odor impacts associated with the proposed project are minimized. As previously discussed, consistent with BAAQMD's CEQA Air Quality Guidelines, a plan-level analysis must acknowledge odor sources within the Planning Area and identify policies, goals, and objectives aimed at reducing potential odor impacts to ensure that potential impacts would be *less than significant*.

### Operation

According to BAAQMD's 2022 CEQA Air Quality Guidelines, land uses associated with odor complaints typically include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations such as chemical and other manufacturing. While odors do not themselves present a health risk, they are often considered a nuisance by people who live, work, or otherwise are located near outdoor odor sources. Buildout permitted under the proposed project would not include odor-generating uses, such as composting, greenwaste, and recycling operations; food processing; and painting/coating operations, because these are types of uses are often found in the commercial and/or industrial areas. Increase in residential uses would not generate substantial odors that would affect a substantial number of people. During operation, residences could generate odors from cooking. However, odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people.

The Conservation, Open Space, Parks, and Recreation (COS) Element of the proposed General Plan provides guidance for the development, management, and preservation of San Mateo's natural, recreational, and cultural resources, including air quality. Specifically, proposed General Plan Policies COS 4.8, COS 4.12, and COS 4.14 listed under the subheading "Impacts of the Environment on a Project" above would serve to minimize impacts related to potential adverse impacts related to odors. Therefore, compliance with proposed General Plan policies, as well applicable BAAQMD rules and regulations,

would prevent odor emissions from adversely affecting a substantial number of people in the EIR Study Area.

Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, *Odorous Substances*, which requires abatement of any nuisance generating an odor complaint. In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, *Public Nuisance*. Compliance with BAAQMD Regulation 7 and 1 would ensure that odor impacts associated with the proposed project are minimized. This impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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AQ-6	The proposed project would, in combination with past, present, and reasonably foreseeable projects, result in cumulative air quality impacts in the area.
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## Criteria Air Pollutants

The cumulative area of analysis is the SFBAAB. As identified in Section 4.2.1, *Environmental Setting*, California is divided into air basins for the purpose of managing the air resources of the state on a regional basis based on meteorological and geographic conditions. Similar to GHG emissions impacts, air quality impacts are regional in nature as no single project generates enough emissions that would cause an air basin to be designated as a nonattainment area. Criteria air pollutant emissions generated by cumulative development associated with buildout of the proposed project would exceed BAAQMD's project-level significance thresholds during construction and operation and would contribute to the nonattainment designations of the SFBAAB.

The SFBAAB is currently designated a nonattainment area for O<sub>3</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Therefore, in combination with past, present, and reasonably foreseeable projects elsewhere within the SFBAAB, the proposed project, even with implementation of applicable regulations and Mitigation Measures AQ-2, AQ-3, AQ-4, would result in a *significant* cumulative impact with respect to air quality.

## Toxic Air Contaminants

Buildout of the proposed project would generate new sources of TAC near existing or planned sensitive receptors. Review of development projects by BAAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Mitigation Measure AQ-4 would ensure mobile sources of TACs not covered by BAAQMD permits are considered during subsequent project-level environmental review by the City of San Mateo. Individual development projects would be required to achieve the incremental risk thresholds established by BAAQMD, and TACs would be less than significant. However, implementation of the proposed project would generate TACs that could contribute to elevated levels in the SFBAAB. While individual projects would achieve the project-level risk threshold of 10 per million, they would nonetheless contribute to the higher levels of cancer risk in the SFBAAB, and therefore result in a

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cumulatively considerable impact. Therefore, the cumulative contribution to health risk resulting from implementation of the proposed project is *significant*.

**Impact AQ-6:** Implementation of the proposed project would generate a substantial increase in emissions that exceeds the Bay Area Air Quality Management District's significance thresholds and would cumulatively contribute to the nonattainment designations and health risk in the San Francisco Bay Area Air Basin.

**Mitigation Measure AQ-6:** Implement Mitigation Measures AQ-2, AQ-3, and AQ-4.

**Significance with Mitigation:** Significant and unavoidable. Criteria air pollutant emissions generated by land uses within the proposed project could exceed the BAAQMD regional thresholds (see Impacts AQ-2 and AQ-3). Air quality impacts identified in the discussion under Impacts AQ-1, AQ-2, and AQ-3, constitute the proposed project's contribution to cumulative air quality impacts in the SFBAAB. Mitigation Measures AQ-2, AQ-3, and AQ-4 would help reduce project-related emissions to the extent feasible. However, due to the programmatic nature of the proposed project, no additional mitigation measures are available. Air pollutant emissions associated with the proposed project would result in a cumulatively considerable contribution to air quality impacts and remain *significant and unavoidable* at the program level.



## BIOLOGICAL RESOURCES

### 4.3 BIOLOGICAL RESOURCES

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential biological resource impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.3.1 ENVIRONMENTAL SETTING

##### 4.3.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

##### *Federal Endangered Species Act*

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (FESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the FESA. FESA defines “take” as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Title 50, Wildlife and Fisheries, Part 17, Endangered and Threatened Wildlife and Plants, Section 17.3, Definitions, of the Code of Federal Regulations, defines the term “harass” as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering. Furthermore, Section 17.3 defines “harm” as an act that either kills or injures a listed species. By definition, “harm” includes habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering.

Section 10(a) of the FESA establishes a process for obtaining an incidental take permit that authorizes nonfederal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by FESA as take that is “*incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.*” Preparation of a habitat conservation plan (HCP) is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the FESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the FESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the FESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required to minimize impacts to all listed species resulting from their actions, including issuance of permits or funding. Section

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7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (FESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the HCP will result in jeopardy to any HCP Covered Species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, Section 9 of the FESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other “take” that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act (CESA).

### *Clean Water Act*

The United States Army Corps of Engineers (USACE) is responsible under Section 404 of the Clean Water Act to regulate the discharge of fill material into waters of the United States (U.S.). These waters, and their lateral limit, include streams that are tributaries to navigable waters and their adjacent wetlands.<sup>1</sup> The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the ordinary high-water mark<sup>2</sup> or the limit of adjacent wetlands.<sup>3</sup> Any permanent extension of the limits of an existing water of the U.S., whether natural or human-made, results in a similar extension of USACE jurisdiction.

Waters of the U.S. fall into two broad categories: wetlands and other waters. Other waters include waterbodies and watercourses generally lacking plant cover, such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Wetlands are aquatic habitats that support hydrophytic wetland plants and include marshes, wet meadows, seeps, floodplains, basins, and other areas experiencing extended seasonal soil saturation. Seasonally or intermittently inundated features, such as seasonal ponds, ephemeral streams, and tidal marshes, are categorized as wetlands if they have hydric soils and support wetland plant communities. Seasonally inundated waterbodies or watercourses that do not exhibit wetland characteristics are classified as other waters of the U.S.

Waters and wetlands that cannot trace a continuous hydrologic connection to a navigable water of the U.S. are not tributary to waters of the U.S. These are termed “isolated wetlands.” Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce.<sup>4</sup> The USACE may or may not take jurisdiction over isolated wetlands depending on the specific circumstances.

In general, a project proponent must obtain a Section 404 permit from the USACE before placing fill or grading in wetlands or other waters of the U.S. Prior to issuing the permit, the USACE is required to consult with the USFWS under Section 7 of the FESA if the project may affect federally listed species.

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<sup>1</sup> Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(a).

<sup>2</sup> Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(e).

<sup>3</sup> Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(b).

<sup>4</sup> Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(a).

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All USACE permits require water quality certification under Section 401 of the Clean Water Act. In the San Francisco Bay Area, this regulatory program is administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB). Project proponents who propose to fill wetlands or other waters of the U.S. must apply for water quality certification from the San Francisco Bay RWQCB. The San Francisco Bay RWQCB has adopted a policy requiring mitigation for any loss of wetland, streambed, or other jurisdictional area.

### *Migratory Bird Treaty Act*

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term “take” is defined as “to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires.” Most bird species native to North America are covered by this act.

## State Regulations

### *California Endangered Species Act*

The California Department of Fish and Wildlife (CDFW) has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under CESA.<sup>5</sup> CESA is similar to the FESA both in process and substance; it is intended to provide additional protection to threatened and endangered species in California. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws apply) or under only one act. A candidate species is one that the Fish and Game Commission has formally noticed as being under review by CDFW for addition to the State list. Candidate species are protected by the provisions of CESA.

### *California Environmental Quality Act*

The California Environmental Quality Act (CEQA) applies to “projects” proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as having the potential to have physical impact on the environment. Under Section 15380 of the CEQA Guidelines, a species not included on any formal list “shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria” for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a “de facto” rare or endangered species.

### *California Fish and Game Code*

The CDFW is responsible for enforcing the California Fish and Game Code (CFGC), which contains several protections from “take” for a variety of species. The CDFW also protects streams, water bodies, and riparian corridors through the Streambed Alteration Agreement process under Section 1601 to 1606 of the CFGC. The CFGC stipulates that it is “unlawful to substantially divert or obstruct the natural flow or

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<sup>5</sup> California Fish and Game Code Section 2050 *et seq.*

## BIOLOGICAL RESOURCES

substantially change the bed, channel or bank of any river, stream or lake” without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. CDFW’s jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

The CFGC also lists animal species designated as Fully Protected or Protected, which may not be taken or possessed at any time. The CDFW does not issue licenses or permits for take of these species except for necessary scientific research, habitat restoration/species recovery actions, or live capture and relocation pursuant to a permit for the protection of livestock. Fully protected species are listed in CFGC Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the Fish and Game Code, while protected amphibians and reptiles are listed in Chapter 5, Sections 41 and 42, respectively.

Several provisions in the CFGC provide for the protection of birds and bird nests in active use. Unless the CFGC or its implementing regulations provide otherwise, under California law it is unlawful to:

- Take a bird, mammal, fish, reptile, or amphibian.
- Take, possess, or needlessly destroy the nest or eggs of any bird.
- Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks and eagles) or the nests or eggs of such bird.
- Take or possess any of the thirteen fully protected bird species listed in CFGC Section 3511.
- Take any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).
- Take or possess any migratory non-game bird as designated in the MBTA or any part of such bird, except as provided by rules or regulations adopted by the DOI under the MBTA.
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the CESA unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW.

Non-native species, including European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), and rock pigeon (*Columba livia*), are not afforded any protection under the MBTA or CFGC.

### *Porter-Cologne Water Quality Control Act*

Under the Porter-Cologne Water Quality Control Act,<sup>6</sup> the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State’s waters. The RWQCB asserts jurisdiction over isolated waters and wetlands, as well as waters and wetlands that are regulated by the USACE. Therefore, even if a project does not require a federal permit, it still requires review and approval by the RWQCB. When reviewing applications, the RWQCB focuses on ensuring that projects do not adversely affect the “beneficial uses” associated with waters of the State. In most cases, the RWQCB seeks to protect these beneficial uses by requiring the integration of waste discharge requirements into projects that will

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<sup>6</sup> California Water Code Sections 13000 through 14920.

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require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction best management practices.

### *California Native Plant Protection Act*

The California Native Plant Protection Act of 1977 prohibits importation of rare and endangered plants into California, “take” of rare and endangered plants, and sale of rare and endangered plants. The CESA defers to the California Native Plant Protection Act, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the California Native Plant Protection Act are not protected under the CESA but rather under CEQA.

The California Native Plant Society (CNPS) is a non-governmental conservation organization that has developed a list of plants of special concern in California. The following explains the designations for each plant species:<sup>7</sup>

- **Rank 1A.** Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
- **Rank 1B.** Plants Rare, Threatened, or Endangered in California and Elsewhere
- **Rank 2A.** Plants Presumed Extirpated in California, But Common Elsewhere
- **Rank 2B.** Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- **Rank 3.** Plants About Which More Information is Needed; A Review List
- **Rank 4.** Plants of Limited Distribution; A Watch List

### *California Natural Communities*

Sensitive natural communities are natural community types considered to be rare or of a “high inventory priority” by the CDFW. Although sensitive natural communities have no legal protective status under FESA or CESA, they are provided some level of consideration under CEQA. Appendix G of the CEQA Guidelines identifies potential impacts on a sensitive natural community as one of six criteria to consider in determining the significance of a proposed project. While no thresholds are established as part of this criterion, it serves as an acknowledgement that sensitive natural communities are an important resource and, depending on their rarity, should be recognized as part of the environmental review process. The level of significance of a project’s impact on any particular sensitive natural community will depend on that natural community’s relative abundance and rarity.

As an example, a discretionary project that has a substantial adverse effect on any riparian habitat, native grassland, valley oak woodland, and/or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality and degree of past disturbance, and the anticipated impacts to the specific community type.

<sup>7</sup> California Native Plant Society, CNPS Inventory of Rare Plants, <https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants#:~:text=List%20of%20Plants%20Presumed%20Extinct,is%20currently%20considered%20CRPR%204.>, accessed August 8, 2022.



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### *Oak Woodlands Conservation Act*

The California Oak Woodlands Conservation Act<sup>8</sup> of 2001 acknowledges the importance of private land stewardship to the conservation of the state's valued oak woodlands. This act established the California Oak Woodlands Conservation Program, which aims to conserve oak woodlands existing in the state's working landscapes by providing education and incentives to private landowners. The program provides technical and financial incentives to private landowners to protect and promote biologically functional oak woodlands.

## Regional Regulations

### *McAteer-Petris Act*

In 1969, the McAteer-Petris Act designated the San Francisco Bay Conservation and Development Commission (BCDC) as the agency responsible for the protection of the San Francisco Bay. The two primary goals of the BCDC are (1) to prevent the unnecessary filling of San Francisco Bay, and (2) to increase public access to and along the Bay shoreline. BCDC fulfills its mission through the implementation of the San Francisco Bay Plan (Bay Plan), an enforceable plan that guides the future protection and use of San Francisco Bay and its shoreline.<sup>9</sup> The Bay Plan includes a range of policies on public access, water quality, fill, and project design, and designates shoreline areas that should be reserved for water-related purposes like ports, industry, and public recreation, airports, and wildlife areas.<sup>10</sup>

As a permitting authority along the San Francisco Bay shoreline, BCDC is responsible for granting or denying permits for any proposed fill, extraction of materials, or change in use of any water, land, or structure within 100 feet of the Bay shoreline. Projects in BCDC jurisdiction that involve Bay fill must be consistent with the Bay Plan policies on the safety of fills and shoreline protection.

### *San Francisco Bay Basin Water Quality Control Plan*

The San Francisco Bay RWQCB adopted a Water Quality Control Plan for the San Francisco Bay Basin (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan, which includes wetlands in and near the EIR Study Area. It is the RWQCB's master water quality control planning document. The most recent amendments were incorporated into the Basin Plan as of May 2017.<sup>11</sup>

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<sup>8</sup> California Fish and Game Code Section 1360 et seq.

<sup>9</sup> San Francisco Bay Conservation and Development Commission, May 5, 2020, *San Francisco Bay Plan*, <https://bcdc.ca.gov/pdf/bayplan/bayplan.pdf>, accessed August 8, 2022.

<sup>10</sup> San Francisco Bay Conservation and Development Commission, May 5, 2020, *San Francisco Bay Plan*, <https://bcdc.ca.gov/pdf/bayplan/bayplan.pdf>, accessed August 8, 2022.

<sup>11</sup> San Francisco Bay Regional Water Quality Control Board, 2017, *San Francisco Bay Basin Water Quality Control Plan (Basin Plan)*, [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/planningtmdls/basinplan/web/docs/BP\\_all\\_chapters.pdf](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/BP_all_chapters.pdf), accessed August 8, 2022.

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### *Bay Delta Conservation Plan*

In March 2009, the *Bay Delta Conservation Plan* (BDCP) was created to restore the ecosystem of the Delta, increase special-status fish populations, and ensure a reliable freshwater supply.<sup>12</sup> The Delta used to be a floodplain and marsh with a thriving ecosystem. It has since been dramatically altered with the construction of artificial levees and dredged waterways, to restore the ecosystem, the BDCP created a conservation strategy. The main goals of the strategy include restoring habitat, reducing acute stressors, and improving water quality flow and operation.

### *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area*

Adopted in 1998, the *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area* covers 28 special status species of plants and animals that occur mainly on serpentine soils and grasslands in the San Francisco Bay Area.<sup>13</sup> Due to much of the San Francisco Bay being converted into urban and industrial uses, many species have been forced to move from their historic ranges. The goal of this recovery plan is to delist certain endangered and threatened species, improve the security of several listed species, and ensure long-term conservation of certain species of concern.

## Local Regulations

### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to biological resources are primarily in the Conservation, Open Space, Parks and Recreation and Safety Elements. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.3.3, *Impact Discussion*.

### *City of San Mateo Municipal Code*

The San Mateo Municipal Code (SMMC) includes various directives pertaining to biological resources. The SMMC is organized by title, chapter, and section. Most provisions related to biological impacts are included in Title 7, *Health, Sanitation, and Public Works*, Title 13, *Parks and Recreation*, Title 23, *Buildings and Construction*, Title 26, *Subdivisions* and Title 27, *Zoning*, as follows:

- Chapter 7.39, *Stormwater Management and Discharge Control*, ensures that watercourses within the city is maintained for unobstructed flow of water, including the removal of debris, natural growth, and other materials. Any person wishing to construct or repair any structure within 30 feet

<sup>12</sup> California State Water Resources Control Board, March 2009, *Bay Delta Conservation Plan*, [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/california\\_waterfix/exhibits/docs/ccc\\_cccwa/CCC-SC\\_12.pdf](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/ccc_cccwa/CCC-SC_12.pdf), accessed August 31, 2022.

<sup>13</sup> United States Fish and Wildlife Service, September 1998, *Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area*, <https://www.nps.gov/goga/learn/management/upload/-1491-Recovery-Plan-for-serpentine-soil-species-of-the-San-Francis.pdf>, accessed August 9, 2022.

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of the center line of a creek or 20 feet of the top of a bank must first obtain a permit from the Public Works Department, to ensure that the free flow of water is not disrupted.

- Chapter 13.40, *Protected Trees*, places the authority to regulate trees along public streets, sidewalks, and walkways within the city, to the Parks and Recreation Department. Tree trimming, planting, and removal must be approved through a permit process by the Parks and Recreation Department.
- Section 23.72.050, *Landscape Project Application and Documentation Package*, sets criteria for water efficiency which includes using native plants.
- Section 23.72.080, *Landscape Design Plan*, aims to encourage water efficiency by creating criteria that protect and preserve native species and natural vegetation. This plan also prohibits planting plants listed by the California Invasive Plant Council.
- Section 26.16.040, *Street Plantings*, regulates all plantings along the street to conform to the Street Trees Master Plan.
- Section 26.16.060, *Open Space Easements*, creates easements within a subdivision for open space to protect significant natural vegetation. When this is done, a deed shall be executed to the City that is acceptable by the City Attorney.
- Chapter 27.59, *S Districts - Shoreline District*, aims to preserve and enhance the value of the shoreline and encourage uses that are compatible with the natural surroundings. All development will be subject to performance standards outlined in Chapter 27.76, *Performance Standards*, and obtain federal and State permits prior to approval of a use permit.
- Section 27.71.150, *Preservation of Existing Trees*, sets forth criteria for documenting and preserving existing trees on construction sites.

### 4.3.1.2 EXISTING CONDITIONS

#### Methodology

Available literature and mapping of biological resources reviewed included the CDFW California Wildlife Habitat Relationships (CWHR) and California Natural Diversity Database (CNDDB), the Federal Endangered and Threatened Species list, the CNPS online Inventory of Rare and Endangered Plants of California, and the National Oceanic and Atmospheric Administration (NOAA) Critical Habitat and Essential Fish Habitat Mappers.

Due to the size of the EIR Study Area, a field reconnaissance survey was not conducted. Determinations regarding each species' potential to occur were made based on information available through the CNDDB, available literature, and professional judgment.

#### Vegetation and Habitat Types

The majority of San Mateo is developed with urban uses. Non-urban land cover within the city includes hardwood forest/woodland and herbaceous land cover and mostly occur along the eastern edge of the

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City Limits and the southwestern portion of San Mateo.<sup>14</sup> CWHR habitats include Annual Grassland, Blue Oak Woodland, Coastal Oak Woodland, Chamise-Redshank Chapparal, Coastal Scrub, Eucalyptus, Lacustrine, Saline Emergent Wetland, Valley Oak Woodland, and Valley Foothill Riparian.<sup>15</sup> Riverine habitats also exist within the EIR Study Area, although not listed by CWHR. Descriptions of each habitat are provided below based on habitat information provided by the CDFW.<sup>16</sup>

### *Annual Grassland*

Annual Grassland habitats are open grasslands composed primarily of annual plant species. They generally occur on flat plains to gently rolling foothills. Introduced annual grasses are the dominant plant species in this habitat and include wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis*), wild barley (*Hordeum spontaneum*), and foxtail fescue (*Vulpia myuros*). Many wildlife species use Annual Grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and escape cover.

### *Blue Oak Woodland*

Blue Oak Woodland habitats are usually associated with shallow, rocky, infertile, well-drained soils. These woodlands generally have an overstory of scattered trees. Blue oaks (*Quercus douglasii*) are the dominant species in this habitat and are well adapted to dry hilly terrain where the water table is usually unavailable. Common associates in the canopy are coast live oak (*Quercus agrifolia*) in the Coast Range and valley oak (*Quercus lobata*) where deep soil has formed. Associated shrub species include poison oak (*Toxicodendron diversilobum*), California coffeeberry (*Rhamnus californica*), buckbrush (*Ceanothus cuneatus*), redberry (*Rhamnus crocea*), California buckeye (*Aesculus californica*), and manzanita (*Arctostaphylos manzanita*). The ground cover is comprised mainly of annuals, such as wild oats, brome grass (*Bromus*), foxtail (*Setaria italica*), needlegrass (*Nassella*), filaree (*Erodium cicutarium*), fiddleneck (*Amsinckia*), and others.

### *Coastal Oak Woodland*

Coastal oak woodlands are common to the mesic coastal foothills of California and provide habitat for a variety of wildlife species. Coastal oak woodlands are extremely variable and its overstory consists of deciduous and evergreen hardwoods. In mesic sites, the trees are dense and form a closed canopy while in drier sites, the trees are widely spaced, forming an open woodland or savannah. Typical understory plants in dense coast live oak woodlands are shade tolerant shrubs such as California blackberry (*Rubus*), creeping snowberry (*Gaultheria hispidula*), toyon (*Heteromeles arbutifolia*), and herbaceous plants such

<sup>14</sup> United States Department of Agriculture and United States Forest Service, State Level Datasets, <https://www.fs.usda.gov/detail/r5/landmanagement/gis/?cid=STELPRDB5327836>, accessed August 4, 2022.

<sup>15</sup> California Department of Fish and Wildlife, 2022, California Wildlife Habitat Relationships, <https://wildlife.ca.gov/Data/CWHR>, accessed August 4, 2022.

<sup>16</sup> California Department of Fish and Wildlife, 2022, Wildlife Habitats – California Wildlife Habitat Relationships System, <https://wildlife.ca.gov/Data/CWHR/Wildlife-Habitats#:~:text=The%20CWHR%20habitat%20classification%20scheme%20was%20developed%20to%20provide%20a,classification%20scheme%20had%2053%20habitats>, accessed August 4, 2022.

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as bracken fern (*Pteridium*), California polypody (*Polypodium californicum*), fiesta flower (*Pholistoma auritum*), and miner's lettuce (*Claytonia perfoliate*). In drier areas where oaks are more widely spaced, the understory may consist almost entirely of grassland species with few shrubs.

### *Chamise-Redshank Chaparral*

Chamise-dominated stands are most common on south- and west-facing slopes; redshank is found on all aspects. Mature Chamise-Redshank Chaparral is single layered, generally lacking well-developed herbaceous ground covers and overstory trees. Shrub canopies frequently overlap, producing a nearly impenetrable canopy of interwoven branches. Chamise-Redshank Chaparral may consist of nearly pure strands of chamise (*Adenostoma fasciculatum*) or redshank (*Adenostoma sparsifolium*), a mix of both, or with other shrubs. Toyon, poison oak, redberry, sugar sumac (*Rhus ovata*), and California buckthorn (*Rhamnus californica*) are commonly found in drainage channels and on other relatively mesic sites. At upper elevations or on more mesic exposures, chamise mixes with manzanita, ceanothus (*Ceanothus*), scrub oak (*Quercus berberidifolia*), and laurel sumac (*Malosma*). Fire occurs regularly in Chamise-Redshank Chaparral.

### *Coastal Scrub*

Coastal Scrub seems to tolerate drier conditions and is typical of areas with steep, south-facing slopes and sandy, mudstone, or shale soils. It also regularly occurs on stabilized dunes, flat terraces, and moderate slopes of all aspects. Structure of the plant associations that comprise Coastal Scrub is typified by low to moderate-sized shrubs with mesophytic leaves, flexible branches, semi-woody stems growing from a woody base, and a shallow root system. No single species is typical of all Coastal Scrub stands. Two types of northern Coastal Scrub are recognized. The first type occurs as low-growing patches of bush lupine (*Lupinus*) and many-colored lupine at exposed oceanside sites. The second and more common type occurs at less exposed sites and coyote bush (*Baccharis pilularis*) dominates the overstory. Southern sage scrub occurs intermittently over a larger area, the most common species being California sagebrush (*Artemisia californica*). The federal- and State-delisted peregrine falcon (*Falco peregrinus*) occurs in Coastal Scrub, though not exclusively.

### *Eucalyptus*

Eucalyptus habitats have been extensively planted throughout the state since their introduction in 1856 and are generally found on relatively flat or gently rolling terrain at low elevations where freezing is not a problem. They range from single-species thickets with little or no shrubby understory to scattered trees over well-developed herbaceous and shrubby understory. In most cases, eucalyptus (*Eucalyptus*) forms a dense stand with a closed canopy. Stand structure for this habitat varies considerably because most eucalyptus have been planted into either rows for wind protection or dense groves for hardwood production and harvesting. The most common species is the blue gum (*Eucalyptus globulus*), followed by redgum (*Eucalyptus camaldulensis*). In groves or rows, the understory is commonly composed of a host of annual grasses and other weedy species including mustard (*Brassica*), thistle (*Cirsium*), spurge (*Euphorbia*), cheeseweed (*Malva*), and prickly pear cactus (*Opuntia*). Eucalyptus is also known to become established along stream courses, encroaching upon existing riparian vegetation. Characteristic species of this habitat include crow (*Corvus*), raven (*Corvus corax*), barn owl (*Tyto alba*), and red-tailed



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(*Buteo jamaicensis*) and red-shouldered hawks (*Buteo lineatus*). Eucalyptus are important as roosts, perches, and nest sites for a number of bird species, particularly raptors (*Falconiformes*).

### Lacustrine

Lacustrine habitats are inland depressions or dammed riverine channels containing standing water that vary from small ponds less than one hectare to large areas covering several square kilometers. They can be found throughout California at all elevations but are less abundant in arid regions. Typical lacustrine habitats include permanently flooded lakes and reservoirs, intermittent lakes, and shallow ponds where rooted plants can grow over the bottom. Most permanent lacustrine systems support fish life; intermittent types usually do not. Suspended organisms such as plankton are found in the open water of lacustrine habitats. Submerged plants such as algae and pondweeds (*Potamogeton*) serve as supports for smaller algae and as cover for swarms of minute aquatic animals. A blanket of duckweed (*Lemnoideae*) may cover the surface of shallow water. Floating plants offer food and support for numerous herbivorous animals that feed both on phytoplankton and the floating plants such as water lilies (*Nymphaeaceae*) and smartweeds (*Persicaria*).

### Saline Emergent Wetland

Saline Emergent Wetlands are characterized as salt or brackish marshes consisting mostly of perennial graminoids and forbs along with algal mats on moist soils and at the base of vascular plant stems. They occur above intertidal sand and mudflats and below upland communities not subject to tidal action, along the margins of bays, lagoons, and estuaries. Vegetational coverage is complete or nearly so, except where creeks and ponds are present or following disruption. Saline Emergent Wetlands provide food, cover, and nesting and roosting habitat for a variety of birds, mammals, reptiles, and amphibians. Endemic subspecies or birds include the California black rail (*Laterallus jamaicensis coturniculus*) and three subspecies of the song sparrow (*Melospiza melodia*), and characteristic mammals include the endangered salt marsh harvest mouse (*Reithrodontomys raviventris*) endemic at San Francisco Bay.

### Valley Oak Woodland

Valley Oak Woodland habitat varies from savanna-like to forest-like stands with partially closed canopies, comprised mostly of winter-deciduous, broad-leaved species. This habitat occurs in a wide range of settings but is best developed on deep, well-drained alluvial soils, usually in valley bottoms. Canopies of these woodlands are dominated exclusively by valley oaks and most large, healthy valley oaks are rooted down to permanent water supplies. Coast live oak and foothill pine (*Pinus sabiniana*) are associated with the Valley Oak Woodland habitats along the Coast Range. The shrub understory consists of California blackberry, California coffeeberry, poison oak, toyon, blue elder (*Sambucus cerulea*), and California wild grape (*Vitis californica*). Various sorts of wild oats, needlegrass, brome, barley, and ryegrass (*Lolium*) dominate the ground cover. These woodlands provide food and cover for many species of wildlife. Oaks have long been considered important to some birds and mammals as a food resource.

### Valley Foothill Riparian

Valley Foothill Riparian habitats are found in valleys bordered by sloping alluvial fans, slightly dissected terraces, lower foothills, and coastal plains. Most trees are winter deciduous. The understory is generally

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impenetrable and includes fallen limbs and other debris. Dominant species in the canopy layer are valley oak, cottonwood (*Populus sect. Aigeiros*), and California sycamore (*Platanus racemosa*). Typical understory shrub layer plants include California blackberry, blue elderberry, poison oak, wild grape (*Vitis vinifera*), wild rose (*Rosa*), buttonbrush (*Cephalanthus occidentalis*), and willows (*Salix*). The herbaceous layer consists of miner's lettuce, sedges (*Cyperaceae*), rushes (*Juncaceae*), grasses (*Poaceae*), Douglas sagewort (*Artemisia douglasiana*), poison-hemlock (*Conium maculatum*), and hoary nettle (*Urtica dioica* ssp.). Valley Foothill Riparian habitats provide food, water, migration and dispersal corridors, and escape, nesting, and thermal cover for an abundance of wildlife.

### *Riverine*

Riverine habitats can be found adjacent to many rivers and streams and contiguous to lacustrine and fresh emergency wetland habitat. A stream originates at some elevated source and flows downward at a rate relative to slope and the volume of discharge. Velocity generally declines at progressively lower altitudes, and the volume of water increases until the enlarged stream becomes sluggish. The majority of fast stream inhabitants include nymphs of mayflies (*Ephemeroptera*), caddisflies (*Trichoptera*), alderflies (*Sialidae*), and stoneflies (*Plecoptera*), that live in riffles, on the underside of rubble and gravel, sheltered from the current. In pools, dominant insects are burrowing mayfly nymphs, dragonflies (*Anisoptera*), damselflies (*Zygoptera*), and water striders (*Gerridae*). Water moss (*Fontinalis antipyretica*) and heavily branched filamentous algae are held to rocks by strong holdfasts and align with the current. In slower moving water, mollusks (*Mollusca*) and crustaceans (*Crustacea*) replace the rubble-dwelling insects. Emergent vegetation grows along riverbanks, and duckweed floats on the surface. The open water zones of large rivers provide resting and escape cover for many species of waterfowl. Gulls (*Larus*), terns (*Sternidae*), osprey (*Pandion haliaetus*), and bald eagle (*Haliaeetus leucocephalus*) hunt in open water.

## Special-Status Species

Special-status species are defined as plants and animals legally protected under the State and/or federal Endangered Species Acts (FESA and CESA) or other regulations, as discussed in Section 4.3.1.1, *Regulatory Framework*. Special-status species also include species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat. Species with legal protection under FESA and CESA often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species.

The CNDDDB is California's primary inventory on the distribution of special-status species, which is maintained by the Biogeographic Data Branch of the CDFW. The CNDDDB inventory provides the most comprehensive statewide information on the location and distribution of special-status species and sensitive natural communities. Occurrence data is obtained from a variety of scientific, academic, and professional organizations, as well as private consulting firms, and is entered into the inventory as expeditiously as possible. The occurrence of a species of concern in a particular region is an indication that an additional population may occur at another location if habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question, it only indicates that no data has been entered into the

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CNDDDB inventory. Detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location, where there is evidence of potential occurrence.

The CNDDDB, CNPS, and USFWS database searches report a total of 30 special-status species historically and/or potentially occurring within or in the vicinity the EIR Study Area. Of the total, 12 special-status plants, 11 special-species animals were found to have some potential to occur. The remaining listed special-status species were found to be absent and there is no suitable habitat in the EIR Study Area or the EIR Study Area is outside the known range for the species. These species are listed in Table 4.3-1, *Potentially Occurring Special-Status Species*, and occurrences are shown in Figure 4.3-1, *Special-Status Plant Species and Sensitive Natural Communities*, and Figure 4.3-2, *Special-Status Animal Species*.

### Sensitive Natural Communities

Sensitive natural communities are community types recognized by CDFW and other agencies because of their rarity. As shown in Figure 4.3-1, sensitive natural community types in the EIR Study Area include the Northern coastal salt marsh in the northeastern portion of the city.<sup>17</sup>

### Critical Habitat

There are no USFWS-designated critical habitats within the city, but critical habitat for the Bay checkerspot butterfly lies between southwestern City Limits and I-280 (see Figure 4.3-2).<sup>18</sup> There is a NOAA-designated habitat for the green sturgeon within City Limits by the bay.<sup>19</sup> San Mateo is also within NOAA-designated boundaries of EFH for groundfish, Chinook salmon, Coho salmon, and coastal pelagic species.<sup>20</sup>

### Jurisdictional Waters

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. The CDFW, Corps, and RWQCB have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features, as discussed in Section 4.3.1.1, *Regulatory Framework*.

<sup>17</sup> California Department of Fish and Wildlife, February 2022, California Natural Diversity Database, <https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data#43018409-monthly-data-updates>, accessed August 4, 2022.

<sup>18</sup> United States Fish and Wildlife Service, July 2022, Critical Habitat for Threatened & Endangered Species, <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>, accessed August 4, 2022.

<sup>19</sup> National Oceanic and Atmospheric Administration Fisheries, April 2022, National NMFS ESA Critical Habitat Mapper, <https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=68d8df16b39c48fe9f60640692d0e318><https://www.habitat.noaa.gov/apps/efhmapper/>, accessed August 4, 2022.

<sup>20</sup> National Oceanic and Atmospheric Administration Fisheries, July 2021, Essential Fish Habitat Mapper, <https://www.habitat.noaa.gov/apps/efhmapper/>, accessed August 4, 2022.

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**TABLE 4.3-1 POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES**

Species Name	Status (Federal/State/Other)	Habitat Description	Potential to Occur in the EIR Study Area
<b>Plants</b>			
Franciscan onion ( <i>Allium peninsulare</i> var. <i>franciscanum</i> )	--/--/1B.2	Cismontane woodland, valley and foothill grassland. Clay soils; often on serpentine. Dry hillsides.	Potential to occur
Bent-flowered fiddleneck ( <i>Amsinckia lunaris</i> )	--/--/1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland.	Potential to occur
Coastal marsh milk-vetch ( <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i> )	--/--/1B.2	Coastal dunes, coastal scrub, marshes and swamps (coastal salt, streamsides).	Potential to occur
San Francisco collinsia ( <i>Collinsia multicolor</i> )	--/--/1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus.	Potential to occur
Western leatherwood ( <i>Dirca occidentalis</i> )	--/--/1B.2	Broadleafed upland forest; closed-cone coniferous forest; chaparral; cismontane woodland, North Coast coniferous forest; riparian forest; riparian woodland.	Potential to occur
San Mateo woolly sunflower ( <i>Eriophyllum latilobum</i> )	FE/CE/1B.1	Cismontane woodland. Often on road cuts, found on and off serpentine.	Potential to occur
Hillsborough chocolate lily ( <i>Fritillaria biflora</i> var. <i>ineziana</i> )	--/--/1B.1	Cismontane woodland, valley and foothill grassland. Mostly on serpentine.	Potential to occur
Fragrant fritillary ( <i>Fritillaria liliacea</i> )	--/--/1B.2	Often serpentinite; cismontane woodland, coastal prairie, coastal scrub; valley and foothill grassland.	Potential to occur
Marin western flax ( <i>Hesperolinon congestum</i> )	FT/CT/1B.1	Serpentine barrens and serpentine grassland and chaparral.	Low potential to occur
Crystal Springs lessingia ( <i>Lessingia arachnoidea</i> )	--/--/1B.2	Coastal sage scrub, valley and foothill grassland, cismontane woodland. Grassy slopes on serpentine, sometimes on roadsides.	Potential to occur
Arcuate bush-mallow ( <i>Malacothamnus arcuatus</i> )	--/--/1B.2	Chaparral. Gravelly alluvium.	Potential to occur
White-rayed pentachaeta ( <i>Pentachaeta bellidiflora</i> )	FE/CE/1B.1	Cismontane woodland, valley and foothill grassland on open, dry rocky slopes and grassy areas, often on serpentinite.	Low potential to occur
San Francisco owl's-clover ( <i>Triphysaria floribunda</i> )	--/--/1B.2	Coastal prairie, valley, and foothill grassland.	Absent
<b>Birds</b>			
Burrowing owl ( <i>Athene cunicularia</i> )	--/--/SSC, BCC	Open, dry grasslands that contain abundant ground squirrel burrows.	Potential to occur

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**TABLE 4.3-1 POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES**

Species Name	Status (Federal/State/Other)	Habitat Description	Potential to Occur in the EIR Study Area
American peregrine falcon ( <i>Falco peregrinus anatum</i> )	DL/DL/FP, BCC	A variety of open habitats including coastlines, mountains, marshes, bay shorelines, and urban areas. Nest on cliffs, bridges, and tall buildings.	Potential to occur
California black rail ( <i>Laterallus jamaicensis coturniculus</i> )	--/CT/FP, BCC	Salt marshes bordering larger bays, also found in brackish and freshwater marshes.	Very low potential to occur
Alameda song sparrow ( <i>Melospiza melodia pusillula</i> )	--/--/SSC, BCC	Tidal salt marshes on the fringes of the bay. Upper marsh vegetation for nesting.	Potential to occur
California Ridgway's rail ( <i>Rallus obsoletus obsoletus</i> )	FE/CE/FP	Tidal salt marshes with sloughs and substantial cordgrass ( <i>Spartina</i> sp.) cover.	Potential to occur
<b>Fish</b>			
Longfin smelt ( <i>Spirinchus thaleichthys</i> )	FC/CT/--	Open water estuaries and bays, both in saltwater and freshwater areas.	Potential to occur
<b>Insects</b>			
Obscure bumble bee ( <i>Bombus caliginosus</i> )	--/--/--	Coastal areas from Santa Barbara County to Washington.	Potential to occur
Western bumble bee ( <i>Bombus occidentalis</i> )	--/--/--	Found in a variety of habitats. Once common and widespread. Species has declined precipitously, perhaps from disease.	Potential to occur
Bay checkerspot butterfly ( <i>Euphydryas Euphydryas editha bayensis</i> )	FT/--/--	Shallow, serpentine-derived soils, native grassland located on large serpentine outcroppings.	Absent
Ricksecker's water scavenger beetle ( <i>Hydrochara rickseckeri</i> )	--/--/--	Aquatic; known from the San Francisco Bay area.	Potential to occur
San Francisco forktail damselfly ( <i>Ischnura gemina</i> )	--/--/--	Various wetland ecosystems, including seepages and ponds.	Potential to occur
Myrtle's silverspot butterfly ( <i>Speyeria zerene myrtleae</i> )	FE/--/--	Found in coastal prairie, coastal scrub and sand dunes where larval host plant, <i>Viola adunca</i> , is present.	Absent
<b>Mammals</b>			
Pallid bat ( <i>Antrozous pallidus</i> )	--/--/SSC	A variety of open arid habitats (e.g., chaparral, open woodland, deserts); primary roost sites include bridges, old buildings, and in tree hollows and/or bark; sometimes roost in caves and rock crevices.	Very low potential to occur
Santa Cruz kangaroo rat ( <i>Dipodomys venustus venustus</i> )	--/--/--	Sandhill chapparal with sandy soil.	Absent



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**TABLE 4.3-1 POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES**

Species Name	Status (Federal/State/Other)	Habitat Description	Potential to Occur in the EIR Study Area
Hoary bat ( <i>Lasiurus cinereus</i> )	--/--/--	Prefers open habitats with access to trees for cover, roosting in dense foliage.	Very low potential to occur
Salt-marsh harvest mouse ( <i>Reithrodontomys raviventris</i> )	FE/CE/FP	Tidal salt marshes of San Francisco Bay and its tributaries. Requires tall, dense pickleweed for cover.	Potential to occur
<b>Reptiles</b>			
San Francisco garter snake ( <i>Thamnophis sirtalis tetrataenia</i> )	FE/CE/FP	Small reedy marsh-edges and ponds.	Potential to occur

**Status Codes:**

FESA: Federal Endangered Species Act; CESA: California Endangered Species Act; CRPR: California Rare Plant Rank; CDFW: California Department of Fish and Wildlife; USFWS: United States Fish and Wildlife Service; DL: Formally Delisted (delisted species are monitored for five years); SSC: CDFW Species of Special Concern; BCC: USFWS Bird of Conservation Concern

FE: FESA listed, Endangered; FT: FESA listed, Threatened; FP: FESA listed, Protected; CE: CESA listed, Endangered; CT: CESA listed, Threatened;

1B: CRPR/Rare or Endangered in California and elsewhere

2B: CRPR/Plants rare, threatened, or endangered in California but more common elsewhere

3: CRPR/Plants About Which More Information is Needed – A Review List

4: CRPR/Plants of Limited Distribution – A Watch List

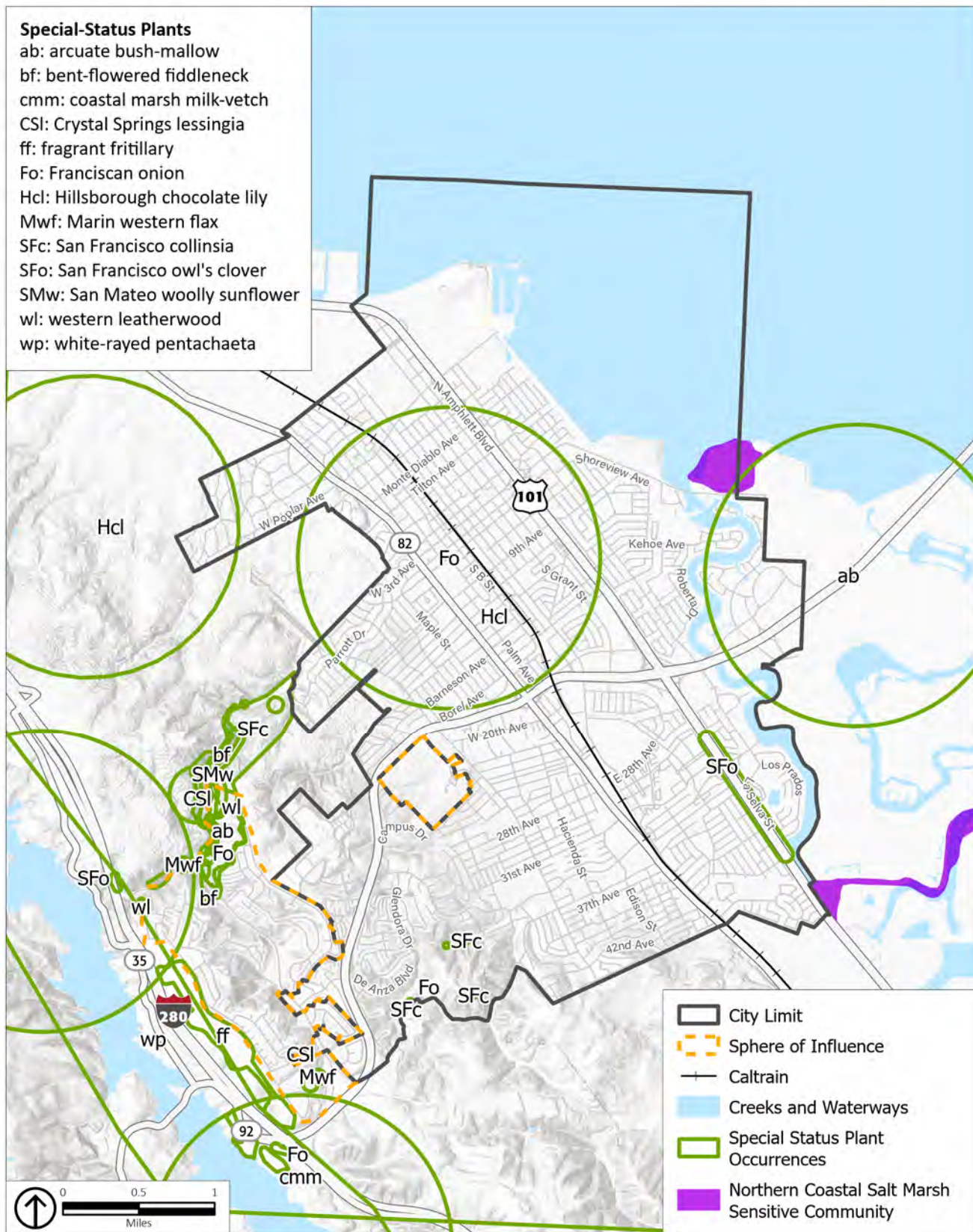
0.1: Threat Rank/Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)

0.2: Threat Rank/Moderately threatened in California (20-80 percent occurrences threatened / moderate degree and immediacy of threat)

0.3: Threat Rank/Not very threatened in California (<20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known)

Source: California Department of Fish and Wildlife, August 2022, California Natural Diversity Database.

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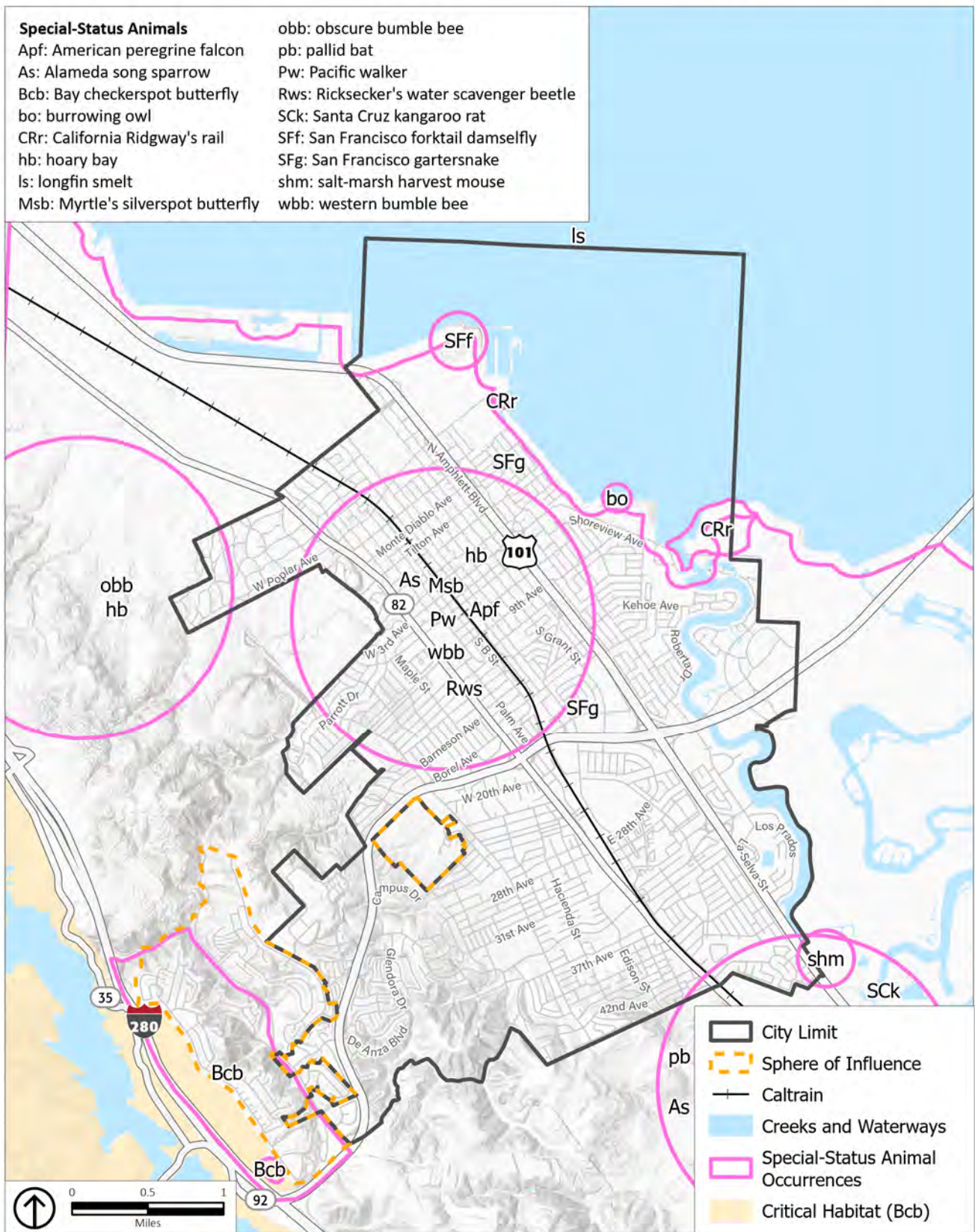


Source: CNDDB, 2022; PlaceWorks, 2023.

Figure 4.3-1  
Special-Status Plant Species and Sensitive Natural Communities



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Source: CNDDb, 2022; PlaceWorks, 2023.

Figure 4.3-2  
Special-Status Animal Species and Critical Habitats

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Features within the EIR Study Area that would be considered wetland include the Marina Lagoon, Borel Creek, Leslie Creek, and the undeveloped land where US Highway 101 and East Hillsdale Boulevard intersect.<sup>21</sup> Additional jurisdictional other waters of the U.S. and wetlands may be present elsewhere in the EIR Study Area, but detailed site-specific assessments would be required to confirm presence or absence from undeveloped lands.

### Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by impassible barriers, large bodies of water, distinct changes in cover, and intensive human activity, among other factors. Urbanization and the resulting fragmentation of undeveloped open space areas can create isolated “islands” of wildlife habitat, separating populations that can lead to genetic isolation and sometimes extirpation. Corridors act as an effective link between populations, allowing for genetic exchange and recruitment of dispersing individual animals where the local carrying capacity, competition and other influences allow.

Wildlife movement through the EIR Study Area is limited due to urbanization of San Mateo. While the EIR Study Area is highly developed, some non-contiguous, vegetated sections along creeks and other areas of open space may provide enough cover to function as a migratory corridor for some species. Riparian habitat along the upper reaches of Laurel Creek within the Sugarloaf Mountain area and along Polhemus Creek may also serve as a wildlife corridor.<sup>22</sup>

### Habitat Conservation Plans

The EIR Study Area is not located within the planning area of an adopted Natural Community Conservation Plan or Habitat Conservation Plan.

#### 4.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant biological resources impact if it would:

1. 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.
2. 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.
3. 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.

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<sup>21</sup> United States Fish and Wildlife Service, National Wetlands Inventory, <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>, accessed August 4, 2022.

<sup>22</sup> City of San Mateo, July 2009, *General Plan Update Draft EIR, Chapter 4.9, Biological Resources*.

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4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
7. In combination with past, present, and reasonably foreseeable projects, result in cumulative biological resource impacts in the area.

### 4.3.3 IMPACT DISCUSSION

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<b>BIO-1</b>	<b>The proposed project 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.</b>
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Local, regional, State, and federal regulations provide varying levels of protection for special-status species, depending on a number of factors, including legal protective status, rarity and distribution, the magnitude of the potential impact on essential habitat, specific occurrence and overall population levels, and take of individual plants or animals. Future development projects that could occur under the proposed project would be evaluated for their potential impact on special-status species and other sensitive biological resources, and activities requiring discretionary approvals by local, regional, State, and federal agencies would be subject to regulatory oversight.

As indicated in Table 4.3-1, *Potentially Occurring Special-Status Species*, 13 special-status plant species are reported to occur within or in the vicinity of the EIR Study Area. These consist of Franciscan onion, bent-flowered fiddleneck, coastal marsh milk-vetch, San Francisco collinsia, western leatherwood, San Mateo woolly sunflower, Hillsborough chocolate lily, fragrant fritillary, Marin western flax, Crystal Springs lessingia, arcuate bush-mallow, white-rayed pentachaeta, and San Francisco owl's-clover. As shown in Table 4.3-1, San Mateo woolly sunflower and white-rayed pentachaeta are listed as endangered, and Marin western flax as threatened, under both the FESA and CESA.

As indicated in Table 4.3-1, a total of 17 special-status animal species are reported to occur within or in the vicinity of the EIR Study Area. These consist of burrowing owl, American peregrine falcon, California black rail, Alameda song sparrow, California Ridgway's rail, longfin smelt, obscure bumble bee, Western bumble bee, Bay checkerspot butterfly, Ricksecker's water scavenger beetle, San Francisco forktail damselfly, Myrtle's silverspot butterfly, pallid bat, Santa Cruz kangaroo rat, hoary bat, salt-marsh harvest mouse, and San Francisco garter snake. As shown in Table 4.3-1, these species have varied legal status or are considered Species of Special Concern by the CDFW. A few have no special status but are monitored by the CDFW because of recent declines and abundance.



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As discussed in Chapter 3, *Project Description*, of this Draft EIR, future development and redevelopment activities are expected to be focused in the ten General Plan Land Use Study Areas, with approximately 90 percent of new development expected to occur in the General Plan Land Use Study Areas. As described in Chapter 3, the General Plan Land Use Study Areas are all near transit, contain aging shopping centers, or are areas where people have expressed interest in considering redevelopment; that is, they are areas that are already developed. The potential for occurrence of special-status species in developed areas is generally very remote in comparison to undeveloped lands with natural habitat that contain essential habitat characteristics for the range of species known in the EIR Study Area vicinity. While the potential for adverse impacts on special-status species is relatively low, there remains a varying potential for loss or disruption due to conversion of areas of natural habitat, removal of trees and other vegetation, increases in light and noise, and other modifications and disturbance. Development in locations abutting or in the vicinity of open space lands or water resources, where special-status species are more likely to occur, could potentially cause a significant impact to, or cause the inadvertent loss, of bird nests in active use, conflicting with both the MBTA and CFGC.

The Conservation, Open Space, and Recreation (COS) Element of the proposed General Plan provides guidance for the development, management, and preservation of San Mateo's natural, recreational, and cultural resources, including biological resources. The following General Plan 2040 goals, policies, and action would serve to minimize potential adverse impacts related to special-status species:

- **Goal COS-1:** Protect and enhance the City's natural resource areas that provide plant and animal habitat and benefit human and ecological health and resilience.
  - **Policy COS 1.1: Sensitive Natural Communities.** Protect riparian habitat and other sensitive natural communities. When an opportunity arises, restore natural resources, including wetlands.
  - **Policy COS 1.2: Interjurisdiction Coordination.** Coordinate with adjacent jurisdictions and regional, State, and federal agencies to protect critical wildlife habitat, including by participating in comprehensive habitat management programs.
  - **Policy COS 1.3: Site Evaluations.** Require independent professional evaluation of sites for any public or private development within known or potential habitat of species designated by State and federal agencies as rare, threatened, or endangered.

The site evaluation shall determine the presence/absence of these special-status plant and animal species on the site. The surveys associated with the evaluation shall be conducted for proper identification of the species. The evaluation shall consider the potential for significant impacts on special-status plant and animal species and shall include feasible mitigation measures to mitigate such impacts to the satisfaction of the City and appropriate governmental agencies (e.g., US Fish and Wildlife Service and California Department of Fish and Wildlife). The City shall require adequate mitigation measures for ensuring the protection of sensitive resources and achieving "no net loss" of sensitive habitat acreage, values, and functions.

In lieu of the site evaluation, presence of special-status plant and animal species may be assumed, and the City may require "no net loss" mitigation of sensitive habitat acreage be applied to the satisfaction of the City and appropriate governmental agencies.

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- **Policy COS 1.4: Avoidance of Nesting Birds.** Native bird nests in active use should be avoided in compliance with State and federal regulations. For new development sites where nesting birds may be present, vegetation clearing and construction should be initiated outside the bird nesting season (March 1 through August 31) or preconstruction surveys should be conducted by a qualified biologist in advance of any disturbance. If active nests are encountered, appropriate buffer zones should be established based on recommendations by the qualified biologist and remain in place until any young birds have successfully left the nest.
- **Policy COS 1.5: Surveys for Sensitive Natural Communities.** Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of sensitive natural communities prior to development approval. Such surveys should be conducted by a qualified biologist and occur prior to development-related vegetation removal or other habitat modifications.
- **Policy COS 1.6: Surveys for Regulated Waters.** Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of regulated waters prior to development approval. Such surveys should be conducted by a qualified wetland specialist and occur prior to development-related vegetation removal or other habitat modifications.
- **Policy COS 1.7: Surveys for Wildlife Movement Corridors.** Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of important wildlife corridors prior to development approval. Such surveys should be conducted by a qualified biologist and occur prior to development-related vegetation removal or other habitat modifications.
- **Policy COS 1.8: Development Near Wetlands or Water.** Avoid wetlands development where feasible (as defined under California Environmental Quality Act [CEQA] Guidelines, Section 15364). Restrict or modify proposed development in areas that contain wetlands or waters to ensure the continued health and survival of special-status species and sensitive habitat areas. Development projects shall be designed to avoid impacts on sensitive resources, or to adequately mitigate impacts by providing on-site or off-site replacement at a higher ratio. Project design modification should include adequate avoidance measures, such as the use of setbacks, buffers, and water quality, drainage-control features, or other measures to ensure that no net loss of wetland acreage, function, water quality protection, and habitat value occurs. This may include the use of setbacks, buffers, and water quality, drainage-control features, or other measures to maintain existing habitat and hydrologic functions of retained wetlands and waters of the US.
- **Policy COS 1.9: Wetland Development Mitigation.** If an applicant has demonstrated that wetlands avoidance is not feasible, provide replacement habitat on-site through restoration and/or habitat creation to ensure no net loss of wetland acreage, function, water quality protection, and habitat value. Allow restoration of wetlands off-site only when an applicant has demonstrated that on-site restoration is not feasible. Off-site wetland mitigation should consist of the same habitat type as the wetland area that would be lost.

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- **Policy COS 1.10: Wetland Access Design.** Design public access to avoid or minimize disturbance to sensitive resources, including necessary setback/buffer areas, while facilitating public use, enjoyment, and appreciation of wetlands.
- **Policy COS 1.11: Marina Lagoon Island.** Maintain Marina Lagoon Island as a bird nesting and breeding site.
- **Policy COS 1.12: Reduced Risk of Bird Collision.** Require that taller structures be designed to minimize the potential risk of bird collisions using input from the latest bird-safe design guidelines and best management practice strategies to reduce bird strikes.
- **Action COS 1.13 Environmental Review.** Review the environmental documents for projects adjacent to City boundaries regarding impacts and mitigation to species and habitat.
- **Goal COS-3:** Protect and improve San Mateo's creeks as valuable habitat and components of human and environmental health.
  - **Policy COS 3.1: Aesthetic and Habitat Values – Public Creeks.** Preserve and enhance the aesthetic and habitat values of creeks, such as San Mateo, Laurel, and Beresford Creeks, and other City-owned channels in all activities affecting these creeks, including revegetation, rewilding, erosion control, and adequate setbacks for structures.
  - **Policy COS 3.2: Aesthetic and Habitat Values – Private Creeks.** Encourage preservation and enhance the aesthetic and habitat values of privately owned sections of all other creeks and channels.

Compliance with these proposed goals, policies, and action would help protect special-status species, and minimize impacts on any species identified as an endangered, threatened, candidate, sensitive, or special-status species and their habitat; therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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BIO-2	The proposed project would not 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.
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Impacts to riparian habitats and other sensitive natural communities may occur from both direct and indirect sources from implementation of the proposed project. Direct impacts occur as a result of converting natural habitat to development, including construction of new structures, creating impervious surfaces for roadways and parking, and culverting of natural drainages. Direct impacts may also be temporary in nature if they disturb a habitat that is subsequently restored after construction. An indirect impact is a physical change in the environment, which is not immediately related to, but could be caused by, future development and activities under the proposed project. For example, if future development under the proposed project results in a collective reduction in habitat, the values and functions of that remaining habitat would be reduced. Changes in hydrology and water quality, through increases in sedimentation as a result of grading and the introduction of urban pollutants,

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could also have indirect impacts on aquatic habitat and contribute to a reduction in the value of downgradient waters.

As discussed in Section 4.3.1.2, *Existing Conditions*, sensitive natural communities in the EIR Study Area include Northern coastal salt marsh, in the northeastern portion of the city, where Marina Lagoon meets the bay. These marshlands are identified as wetlands under the National Wetlands Inventory, which is discussed further under impact discussion BIO-3.

As discussed in Chapter 3, *Project Description*, of this Draft EIR, potential future development that results from implementation of the proposed project would be focused in the ten General Plan Land Use Study Areas. Although these are urbanized areas, there is a possibility that development could be proposed in locations that may contain riparian habitat or other sensitive natural community. Additionally, potential future development that occurs adjacent to open space areas or along drainages and shoreline areas could have a significant impact on sensitive natural communities if present on a particular site. Further detailed site investigation is typically necessary for individual development projects to determine whether any sensitive natural communities are present on sites with natural habitat.

As discussed in impact discussion BIO-1, the Conservation, Open Space, Parks, and Recreation (COS) Element of the proposed General Plan provides guidance for the development, management, and preservation of San Mateo's natural, recreational, and cultural resources, including biological resources. The proposed General Plan goals, policies, and action listed in impact discussion BIO-1 would serve to minimize potential adverse impacts related to riparian habitat or other sensitive natural community. Specifically, proposed General Plan Policy COS 1.1 calls for the protection of riparian habitat and other sensitive natural communities. Proposed Policy COS 1.5 requires that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of sensitive natural communities prior to development approval.

In addition to these policies, potential future development that occurs under the proposed project would be required to comply with SMMC Chapter 7.39, which requires permits from the Public Works Department for construction or repairment of any structure within 30 feet of the center line of a creek or 20 feet of the top of the bank.

Compliance with SMMC regulations, as well as the proposed General Plan goals, policies, and actions identified would protect riparian habitat or other sensitive natural community. Therefore, the proposed project would have a *less-than-significant* impact on riparian habitat or other sensitive natural community.

**Significance without Mitigation:** Less than significant.

## BIOLOGICAL RESOURCES

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**BIO-3**                      **The proposed project 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.**

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Development and land use activities associated with implementation of the proposed project could result in direct loss or modification to existing wetlands and unvegetated other waters, as well as indirect impacts due to water quality degradation. Affected wetlands could include both the wetland-related sensitive natural community described under impact discussion BIO-2, as well as areas of open water, degraded and modified streams and channels, unvegetated waters, and isolated seasonal wetlands or freshwater seeps. Indirect impacts to wetlands and jurisdictional other waters include an increase in the potential for sedimentation due to construction grading and ground disturbance, an increase in the potential for erosion due to increased runoff volumes generated by impervious surfaces, and an increase in the potential for water quality degradation due to increased levels in non-point pollutants.

Water quality degradation may occur even when wetlands and unvegetated channels are avoided by proposed development if setbacks are inadequate to provide critical vegetation filtration functions. However, potential future development would be required to comply with SMMC Chapter 7.39, which protects and enhances the water quality of the watercourses, water bodies, and wetlands within the city by eliminating non-stormwater discharges to the municipal separate storm drain, controlling the discharge to municipal separate storm drains from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in stormwater discharges to the maximum extent practicable. Indirect water quality-related issues are discussed further in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, and, as discussed in Impact Discussion HYDRO-1, water quality impacts were determined to be *less than significant*. Refer to Chapter 4.9 for a list of General Plan 2040 goals, policies, and actions that would preserve water quality of all water resources in the EIR Study Area, including wetlands.

As discussed in impact discussion BIO-1, the Conservation, Open Space, Parks, and Recreation (COS) Element of the proposed General Plan provides guidance for the development, management, and preservation of San Mateo's natural, recreational, and cultural resources, including biological resources. The proposed General Plan goal, policies, and action listed in impact discussion BIO-1 would serve to minimize potential adverse impacts related to state or federally protected wetlands. Specifically, Policy COS 1.6 requires that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of regulated waters prior to development approval.

Compliance with SMMC regulations, as well as proposed General Plan goals, policies, and actions, would ensure that the proposed project would have a *less-than-significant* impact on wetlands.

**Significance without Mitigation:** Less than significant.



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<b>BIO-4</b>	<b>The proposed project 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.</b>
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Development and land use activities associated with implementation of the proposed project would generally be in urbanized areas with few wildlife corridors or locations and where wildlife is already acclimated to human activity. However, the EIR Study Area does contain some habitat areas that could be adversely affected by new development, particularly along creeks and other drainages, or adjacent to open space and undeveloped lands.

As discussed in impact discussion BIO-1, the Conservation, Open Space, Parks, and Recreation (COS) Element of the proposed General Plan provides guidance for the development, management, and preservation of San Mateo's natural, recreational, and cultural resources, including biological resources. The proposed General Plan goal, policies, and action listed in impact discussion BIO-1 would serve to minimize potential adverse impacts related to the movement of wildlife species or nursery sites. Specifically, proposed General Plan Policy COS 1.5 requires that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of sensitive natural communities prior to development approval.

Potential future development could also result in the potential for bird collisions as a result of new buildings and other structures. Avian injury and mortality resulting from collisions with buildings, towers, and other human-made structures is a common occurrence in urban and suburban settings. Some birds are unable to detect and avoid glass and have difficulty distinguishing between actual objects and their reflected images, particularly when the glass is transparent and views through the structure are possible. Nighttime lighting can interfere with movement patterns of some night-migrating birds, causing disorientation or attracting them to the light source. The frequency of bird collisions in any particular area is dependent on numerous factors, including characteristics of building height, fenestration, and exterior treatments of windows and their relationship to other buildings and vegetation in the area; local and migratory avian populations, their movement patterns, and proximity of water, food and other attractants; time of year; prevailing winds; weather conditions; and other variables. Bird-safe design measures would serve to reduce the potential for bird collisions and can include the following design considerations and best management practice strategies:

- Avoid the use of highly reflective glass as an exterior treatment, which appears to reproduce natural habitat and can be attractive to some birds,
- Limit reflectivity and prevent exterior glass from attracting birds in building plans by utilizing low-reflectivity glass and providing other non-attractive surface treatments,
- Use low-reflectivity glass or other glazing treatments for the entirety of the building's glass surface, not just the lower levels,
- For commercial buildings, interior light "pollution" should be reduced during evening hours through the use of a lighting control system,
- Exterior lighting should be directed downward and screened to minimize illuminating the exterior of the building at night, except as needed for safety and security,

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- Glass skyways or walkways, freestanding glass walls, and transparent building corners should not be allowed,
- Transparent glass should not be allowed at the rooflines of buildings, including in conjunction with green roofs, and
- All roof mechanical equipment should be covered by low-profile angled roofing so that obstacles to bird flight are minimized.

As discussed in impact discussion BIO-1, proposed General Plan Policy COS 1.12 requires that taller structures be designed to minimize the potential risk of bird collisions using input from the latest bird-safe design guidelines and best management practice strategies.

Compliance with proposed General Plan policies and actions would ensure that the proposed project would not interfere with movement of wildlife species or nursery sites; therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

BIO-5	<b>The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</b>
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The City of San Mateo General Plan is the primary planning document for the City of San Mateo. The proposed revisions to policies and actions under Conservation, Open Space, Parks, and Recreation (COS) Element are intended to ensure consistency between the General Plan and Zoning Ordinance. Because the General Plan is the overriding planning document for San Mateo and because the proposed project involves updating the General Plan for internal consistency, implementation of the proposed project would not conflict with local policies and ordinances protecting biological resources. As described in impact discussions BIO-2 and BIO-3, potential future development under implementation of the proposed project would be required to comply with SMMC Chapter 7.39 to protect the flow of water in watercourses within the EIR Study Area. Furthermore, SMMC Chapter 13.40 has additional requirements that provide for the protection and preservation of trees along public streets, sidewalks, and walkways within the city. This chapter requires a permit be approved by the Public Works Department for the trimming, planting, and removal of street trees. SMMC Section 27.71.150 sets forth criteria for documenting and preserving existing trees on construction sites.

Additionally, the Community Design and Historic Resources (CD) Element of the proposed General Plan provides guidance for the development and physical form of San Mateo from the individual neighborhood scale to the overall cityscape and includes policies to help preserve the city's urban forest. The following General Plan 2040 goal and policies would serve to minimize potential adverse impacts related to trees:

- **Goal CD-3:** Protect heritage trees, street trees, and tree stands and maintain the health and condition of San Mateo's urban forest.

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- **Policy CD 3.1: Tree Preservation.** Continue to preserve heritage and street trees throughout San Mateo, where feasible.
- **Policy CD 3.2: Replacement Planting.** Require appropriate replacement planting or payment of an in-lieu fee when protected trees on public or private property are removed.
- **Policy CD 3.3: Tree Protection During Construction.** Require the protection of trees during construction activity; require that landscaping, buildings, and other improvements adjacent to trees be designed and maintained to be consistent with the continued health of the tree.
- **Policy CD 3.5: Tree Maintenance.** Preserve and regularly maintain existing City-owned heritage and street trees to keep them in a safe and healthy condition.
- **Policy CD 3.6: New Development Street Trees.** Require street tree planting where feasible as a condition of all new developments.
- **Policy CD 3.8: Tree Stand Retention.** Preserve the visual character of stands or groves of trees in the design of new or modified projects, where feasible.

Potential future development within the EIR Study Area would be required to comply with applicable SMMC regulations and the proposed General Plan goals, policies, and actions listed, which would reduce potential impacts on sensitive biological resources as a result of implementing the proposed project. With adherence to these regulations, no conflicts with local plans and policies are anticipated, and impacts would be considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>BIO-6</b>	<b>The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.</b>
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The EIR Study Area is not in any local, regional, or State habitat conservation plan areas. Therefore, the proposed project would not conflict with any such plan. The goals, policies, and actions in the proposed General Plan, listed under impact discussions BIO-1 through BIO-5, along with the stated SMMC regulations, would serve to protect and enhance the sensitive natural communities and special-status species within the EIR Study Area. Therefore, *no impact* would occur.

**Significance without Mitigation:** No impact.

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<b>BIO-7</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative biological resource impacts in the area.</b>
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The impacts of potential future development on biological resources tend to be site-specific, and the overall cumulative effects would be dependent on the degree to which significant vegetation and wildlife

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resources are protected on a particular site. This includes preservation of well-developed native vegetation (e.g., native grasslands, oak woodlands, riparian woodland, and chaparral, among others), populations of special-status plant or animal species, and wetland features (e.g., coastal salt marsh, freshwater marsh and seeps, riparian corridors, and drainages). Further, site evaluations would be required for future projects where appropriate to determine the presence of special-status species, nesting birds, sensitive natural communities, regulated waters, and wildlife movement corridors, as required by the proposed General Plan Policies COS 1.3, COS 1.4, COS 1.5, COS 1.6 and COS 1.7, respectively. These biological resource assessments would serve to ensure that important biological resources are identified, protected, and properly managed, and to prevent any significant adverse development-related impacts, including development for the remaining undeveloped lands in the EIR Study Area and surrounding incorporated and unincorporated lands.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing natural wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, public and private open space, and undeveloped properties. New cumulative development in the region could result in further conversion of existing natural habitats to urban and suburban conditions, limiting the existing habitat values of the surrounding area. This could include further loss of wetlands and sensitive natural communities, reduction in essential habitat for special-status species, removal of mature native trees and other important wildlife habitat features, and obstruction of important wildlife movement corridors. Additional development may also contribute to degradation of the aquatic habitat in the creeks throughout the region, including the EIR Study Area. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality.

However, increased development potential in the EIR Study Area is anticipated to predominantly occur in existing urbanized areas. Potential future development that could occur elsewhere in the region, outside of the EIR Study Area, is also anticipated to occur largely in urbanized areas. In the event that potential future development in the region is proposed in an undeveloped area, the project would likely undergo independent environmental review as required by the jurisdiction in which the project is proposed. Further, the goals, policies, and actions applicable to the proposed project would serve to address these contributions to cumulative impacts on sensitive biological and wetland resources, as discussed above. Therefore, the proposed project would not result in a cumulatively considerable impact to biological resources and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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## 4.4 CULTURAL RESOURCES

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential cultural resources impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.4.1 ENVIRONMENTAL SETTING

#### 4.4.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

##### *National Historic Preservation Act*

The National Historic Preservation Act of 1966 established the National Register of Historic Places (National Register) as the official federal designation of historical resources, including districts, sites, buildings, structures, and objects. Resources less than 50 years in age, unless of exceptional importance, are not eligible for the National Register. Properties that are 50 or more years in age may be eligible for the National Register if one or more criterion for historic significance is met and physical integrity is retained. Though a listing in the National Register does not prohibit demolition or alteration of a property, the California Environmental Quality Act (CEQA) requires the evaluation of a project's effects and feasible mitigations on properties that are listed in, or determined eligible for listing in, the National Register.

According to 36 Code of Federal Regulations (CFR) part 60.4, the criteria for inclusion on the National Register, which are worded in a manner to provide for a wide diversity of resources, are based on the resources' quality of significance in American history, architecture, archeology, engineering, as well as the significance of the culture present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. The following aspects are used to evaluate the eligibility of potential resources for listing in the National Register:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- That have yielded, or may be likely to yield, information important in prehistory or history.

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### *Secretary of the Interior's Standards for the Treatment of Historic Properties*

The Secretary of the Interior's Standards for the Treatment of Historic Properties (Secretary's Standards) promote responsible practices that help protect the nation's irreplaceable cultural resources. The Secretary of the Interior's Standards are neither technical nor prescriptive, and cannot, in and of themselves, be used to make essential decisions about which features of the historic building should be saved and which can be changed. But once a treatment is selected, the Secretary of the Interior's Standards provide for philosophical consistency in the work. An individual set of Secretary of the Interior's Standards has been formulated for each of four identified treatment approaches: Preservation, Rehabilitation, Restoration, and Reconstruction. The four approaches are defined below:

- *Preservation* requires retention of the greatest amount of historic fabric, along with the building's historic form, features, and detailing as they have evolved over time.
- *Rehabilitation* acknowledges the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character.
- *Restoration* allows for the depiction of a building at a particular time in its history by preserving materials from the period of significance and removing materials from other periods.
- *Reconstruction* establishes a limited framework for re-creating a vanished or non-surviving building with new materials, primarily for interpretive purposes.

The Secretary's Standards for Rehabilitation—*Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995)—specifically address and encourage alterations or additions to a historic resource to allow new uses while retaining the resource's historic character and are particularly applicable in the Downtown Precise Plan Area. The Secretary of the Interior's Standards for Rehabilitation include the following:

1. A property will be used as it was historically or be given new use that requires minimal changes to its distinctive materials, features, spaces and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alterations of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property shall 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 architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

## CULTURAL RESOURCES

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.<sup>1</sup>

### *Secretary of the Interior's Professional Qualifications Standards*

The Secretary of the Interior's Professional Qualifications Standards define minimum education and experience required to perform historic resources identification, evaluation, registration, and treatment activities. The areas of expertise defined by the Professional Qualifications Standards include History, Archeology, Architectural History, Architecture, and Historic Architecture.<sup>2</sup>

## State Regulations

### *California Environmental Quality Act*

Section 15064.5 of the CEQA Guidelines states that projects which may cause a substantial adverse change in the significance of a historical resource may also have a significant effect on the environment. The CEQA Guidelines define four ways that a property can qualify as a historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources, as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, as supported by substantial evidence in light of the whole record.

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<sup>1</sup> Anne E. Grimmer, revised 2017, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*, <https://www.nps.gov/orgs/1739/upload/treatment-guidelines-2017-part1-preservation-rehabilitation.pdf>, accessed May 19, 2023.

<sup>2</sup> Code of Federal Regulations, 36, CFR Part 61.

## CULTURAL RESOURCES

- The lead agency determines that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5) which means, in part, that it may be eligible for the California Register.

In addition, Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines specify lead agency responsibilities in determining whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project will damage a unique archaeological resource, reasonable efforts may be required of the lead agency so the resources are preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The Public Resources Code also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These provisions protect such remains from disturbance, vandalism, and inadvertent destruction by establishing procedures to be implemented if Native American skeletal remains are discovered during construction of a project and establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant (MLD) and mediate any disputes regarding disposition of such remains.

### *California Register of Historical Resources*

The California Register of Historic Resources (California Register) establishes a list of properties to be protected from substantial adverse change (Public Resources Code Section 5024.1). The State Office of Historic Preservation (OHP) has determined that buildings, structures, and objects 45 years or older may be of historical value. A historical resource may be listed in the California Register if it meets any of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in California's past.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
- It has yielded, or is likely to yield, information important in prehistory or history.

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks, and eligible Points of Historical Interest. Other resources that may be eligible for the California Register, and which require nomination and approval for listing by the State Historic Resources Commission, include resources contributing to the significance of a local historic district, individual historical resources, historical resources identified in historic surveys conducted in accordance with OHP procedures, historic resources or districts designated under a local ordinance consistent with the procedures of the State Historic Resources Commission, and local landmarks or historic properties designated under local ordinance.

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### *California Historical Building Code*

The California Historical Building Code (as set forth in Sections 18950 to 18961 of Division 13, Part 2.7 of Health and Safety Code and as subject to the rules and regulations set forth in 24 CCR Part 8), provides alternative building regulations and standards for permitting repairs, alterations, and additions necessary for the rehabilitation, preservation, restoration (including related reconstruction), or relocation of historical buildings, structures, and properties deemed by any level of government as having importance to the history, architecture, or culture of an area.

### *California Health and Safety Code*

California Health and Safety Code Section 7050.5 requires that in the event that human remains are discovered within the project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

### *California Public Resources Code Section 5097*

Archaeological resources are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code (PRC). In addition, cultural resources are recognized as a nonrenewable resource and therefore receive protection under the California PRC and CEQA.

PRC Sections 5097.9 through 5097.991 provide protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the NAHC. It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

### *State Laws Pertaining to Human Remains*

Any human remains encountered during ground-disturbing activities are required to be treated in accordance with California Code of Regulations Section 15064.5(e) (CEQA), PRC Section 5097.98, and the California Health and Safety Code Section 7050.5. California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Specifically, Section 7050.5 of the California Health and Safety Code 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 whether or not the remains are subject to the coroner's authority. If the human remains are determined to be of Native American origin, the county coroner must contact the California NAHC within 24 hours of this identification. An NAHC representative will then identify a Native American Most Likely Descendant to inspect the site and provide recommendations for



## CULTURAL RESOURCES

the proper treatment of the remains and associated grave goods. In addition, CEQA Guidelines Section 15064.5 specifies the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

### Local Regulations

#### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to cultural resources are primarily in the Conservation, Open Space, Parks and Recreation Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.4.3, *Impact Discussion*.

#### *City of San Mateo Municipal Code*

The San Mateo Municipal Code (SMMC) includes various directives pertaining to cultural resources. The SMMC is organized by title, chapter, and section and, in some cases, articles. Provisions related to cultural resource impacts are included in Title 23, *Building and Construction*, and Title 27, *Zoning*.

- Chapter 23.36, *Historical Building Code*, adopts the 2022 California Historical Building Code as the rules, regulations, and standards within the city as to all matters except as modified or amended in the SMMC.
- Chapter 27.66, *Historic Preservation*, establishes requirements to ensure the preservation and maintenance of the city's historic structures and the Downtown historic district. Section 27.66.030, *Review Required*, outlines the process for reviewing projects that alter the exterior of historic resources. No building permit for an exterior façade modification, exterior alteration, or building addition will be issued until a planning application for Site Plan and Architectural Review has been approved. Under Section 27.66.040, *Conformance with the Standards*, all planning applications involving a designated historic resource are required to be evaluated by an independent architectural historian hired directly by the City to review the project and determine that the project is in compliance with the Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Structure. Any exterior modifications of individually eligible and contributor buildings and new buildings in the Downtown Retail Core subarea of the Downtown Specific Plan shall also conform with the Downtown Retail Core and the Downtown Historic District Design Guidelines. Section 27.66.060, *Demolition*, includes specific requirements related to the demolition of a historic building. A planning application for a Historic Building Demolition Permit is required to be approved by the City Council, and specific findings made to approve the permit. Additionally, demolition of any historic resource is subject to additional review and the requirements of CEQA.

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### 4.4.1.2 EXISTING CONDITIONS

#### Archaeological Resources

San Mateo was initially the home of the Ohlone Indians. The Ramaytush Ohlone population numbered about 2,000 prior to the arrival of the Spanish in 1769.<sup>3</sup> They lived in approximately ten tribes, and villages were organized around watersheds where there was a great abundance of resources. It is known that the Ohlone congregated near San Mateo Creek and the Bay Marshes.<sup>4</sup>

According to an archaeological study conducted in 1983 by David Chavez, the Costanoan people, commonly referred to as Ohlone Indians, are estimated to have been some of the earliest inhabitants in the general area between 5,000 and 7,000 years ago.<sup>5</sup> The study concluded with findings of mortars, pestles, manos, charmstones, bone and deer/elk horn tools, projectile points (including obsidian), and shell ornaments.

As a result of the 1983 archaeological survey, the City concluded that a majority of the city is in a “low sensitivity” zone wherein archaeological resources are not generally expected, but may occur.<sup>6</sup> The 1983 archaeological survey concluded that soil removal and construction have eliminated most above-ground shell mounds; however, the potential exists for the presence of undisturbed subsurface deposits.<sup>7</sup>

See Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR for additional discussion of past and present-day Native American presence in San Mateo.

#### Historical Resources

##### *Historic Overview*

Spanish exploration of San Mateo began in the 1770s, but European settlement of the EIR Study Area started around 1793 when the San Mateo area became an asistencia, or outpost, for Mission Dolores. After Mexican independence from Spain in 1822, the missions were divided into large land grants. Rancho San Mateo and Rancho de las Pulgas encompassed what became San Mateo.<sup>8</sup>

By the end of the Mexican-American War in 1848, California had become a territory of the United States and obtained statehood two years later. The small village of San Mateo began to develop at the juncture of several stagecoach lines, established in the late 1840s and 1850s, and the San Francisco and San Jose Railroad began servicing the community in 1864. San Mateo became a popular destination for tourists visiting Crystal Springs Canyon and for wealthy San Franciscan families, who constructed lavish mansions. The commercial downtown developed around the intersection of the railroad station and B Street, and

<sup>3</sup> County of San Mateo, The Ramaytush Ohlone, The First People to Call the Peninsula Home, <https://www.arcgis.com/apps/Cascade/index.html?appid=ff1475b14956474989181b48dbadd487>, accessed July 29, 2022.

<sup>4</sup> City of San Mateo, amended April 2011. *2030 General Plan, Conservation and Open Space Element*.

<sup>5</sup> City of San Mateo, July 2009, *General Plan Update Draft EIR, Chapter 4.10, Cultural and Paleontological Resources*.

<sup>6</sup> City of San Mateo, amended April 2011, *General Plan 2030, Conservation and Open Space Element*.

<sup>7</sup> City of San Mateo, July 2009, *General Plan Update Draft EIR, Chapter 4.10, Cultural and Paleontological Resources*.

<sup>8</sup> Mitchell P. Postel, *San Mateo: A Centennial History* (San Francisco: Scottwall Associates, 1994), pages 3 to 15.

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schools, utilities, and other public services were established to support the growing population. In 1894, an overwhelming majority of residents voted to incorporate the town of San Mateo.<sup>9</sup>

From the late nineteenth century through the 1930s, numerous residential neighborhoods were established throughout San Mateo, particularly as former estates were sold and subdivided. These include subdivisions in the Central neighborhood in the late nineteenth century, and the San Mateo Park, San Mateo Heights, and Hayward's Addition subdivisions in the early 1900s. Residential development intensified following the 1906 earthquake and fires, with new development concentrated in the Hayward Park, East San Mateo, and North Central neighborhoods. Other notable developments included the Glazenwood neighborhood in the 1920s and the Baywood and Aragon neighborhoods in the 1930s.<sup>10</sup>

San Mateo's population evolved and the community expanded through the early twentieth century. Large numbers of Irish immigrants arrived in the 1860s and were followed by the first Chinese and Japanese immigrants the following decade. Chinese residents initially formed a small Chinatown at B Street and Second Avenue and later at Claremont Street and First Avenue around 1900. Chinese residents continued to live in small clusters in the downtown area well into the 1940s. Japanese immigrants who arrived in San Mateo found employment as domestic workers and at the local salt plant; they also opened small businesses in the burgeoning downtown and became successful gardeners as part of the Peninsula's flower industry. By the turn of the twentieth century, they made up the largest Japanese community in the county.<sup>11</sup>

Following World War II, development increased significantly in San Mateo. Significant postwar development included the construction of the Hillsdale shopping center and large-scale residential tract developments west of El Camino Real.<sup>12</sup>

### *Historic Resources*

The history of San Mateo is represented in the almost 200 recognized historic resources and two historic districts, as identified in the 1989 Historic Building Survey.<sup>13</sup> Approximately 37 of these structures are individually eligible for the National Register. They range from historic buildings in the downtown area to single-family homes from the late nineteenth century. Within the EIR Study Area, six historic resources are listed in the National Register and six historic resources are listed in the California Register, as shown in Table 4.4-1, *Federal- and State-Recognized Historic Resources*.

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<sup>9</sup> Mitchell P. Postel, *San Mateo: A Centennial History* (San Francisco: Scottwall Associates, 1994), pages 19 to 20, 40 to 49, 101; Linda Wickert, "City of San Mateo Historic Building Survey, Final Report," (San Mateo County Historical Association, 1989), 15.

<sup>10</sup> Linda Wickert, "City of San Mateo Historic Building Survey, Final Report," (San Mateo County Historical Association, 1989), pages 14 to 15.

<sup>11</sup> Mitchell P. Postel, *San Mateo: A Centennial History* (San Francisco: Scottwall Associates, 1994), pages 138 to 143, pages 162 to 169.

<sup>12</sup> Mitchell P. Postel, *San Mateo: A Centennial History* (San Francisco: Scottwall Associates, 1994), pages 232 to 238.

<sup>13</sup> San Mateo County Historical Association, September 1989, *City of San Mateo Historic Building Survey Final Report*.

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**TABLE 4.4-1 FEDERAL- AND STATE-RECOGNIZED HISTORIC RESOURCES**

Historic Resource	Location	National Register of Historic Places	California Register of Historic Resources
Baywood Elementary School (1939)	600 Alameda de las Pulgas		X
Ernest Coxhead House	37 East Santa Inez Avenue	X	X
Eugene De Sabla J. Jr. Teahouse and Tea Garden	70 De Sabla Road	X	X
Hotel St. Matthew	215-229 Second Avenue	X	X
National Bank of San Mateo	164 South B Street	X	X
US Post Main Office – San Mateo	210 South Ellsworth Street	X	X
Vollers House	353 North Claremont Street	X	

Source: National Park Service, 2023, National Register of Historic Places, <https://www.nps.gov/subjects/nationalregister/database-research.htm>; California State Parks, Office of Historic Preservation, 2023, California Historical Resources, <https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=41>.

The 1989 Historic Building Survey also identified two National Register-eligible historic districts, the Downtown Historic District and the Glazenwood Historic District.<sup>14</sup> Contributing resources in the Downtown Historic District are primarily concentrated along B Street and Third Avenue and were largely constructed from the late nineteenth century to the late 1930s. The Glazenwood Historic District is a residential subdivision that includes a distinctive concentration of 1920s Spanish Colonial Revival homes.

The 1989 Historic Building Survey undertook preliminary documentation of several neighborhoods located on the east side of El Camino Real. These neighborhoods were subject to an intensive survey and include Central, East San Mateo, Hayward Park, San Mateo Heights, and North Central. Other than the Glazenwood Historic District, which is located within the Hayward Park neighborhood, the 1989 Historic Building Survey did not formally evaluate these neighborhoods as historic districts. The neighborhoods with high concentrations of older homes on the west side of El Camino Real, including Aragon, Baywood, Baywood Knolls, and San Mateo Park, were subject to a visual (windshield) survey. The 1989 Historic Building Survey recommended that future historic resources surveys be undertaken to comprehensively document and evaluate these neighborhoods as historic districts.

The remaining individual properties listed in the 1989 Historic Building Survey as eligible or potentially eligible for listing in the National Register or as locally significant are considered potential historic resources but are not formally listed or landmarked. In subsequent decades, many other properties in San Mateo have been determined to be historic resources through the environmental review process. Documentation on these properties is maintained by the city.

### 4.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant cultural resources impact if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.

<sup>14</sup> San Mateo County Historical Association, September 1989, *City of San Mateo Historic Building Survey Final Report*.

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2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.
4. In combination with past, present, and reasonably foreseeable projects, result in cumulative cultural resource impacts in the area.

### 4.4.3 IMPACT DISCUSSION

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<b>CULT-1</b>	<b>The proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.</b>
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The types of cultural resources that meet the definition of historical resources under CEQA Guidelines Section 15064.5 generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural, and/or historical associations, as detailed in Section 4.4.1.1, *Regulatory Framework*. Under CEQA, both prehistoric- and historic-period archaeological sites may qualify based on historical associations. As such, the two main historical resources that are subject to impact, and that may be impacted by implementation of the proposed project, are historical archaeological deposits and historical architectural resources. Potential impacts to archaeological resources are described in impact discussion CULT-2, and potential impacts to human remains are addressed in impact discussion CULT-3.

As discussed under Section 4.4.1.2, *Existing Conditions*, several individual properties and historic districts within the EIR Study Area meet the CEQA definition of a historical resource, including 7 properties that are individually listed in the National Register and/or California Register and approximately 37 individual properties and 2 historic districts that are eligible for listing in the National Register. In addition to these known historical resources, unidentified or undesignated historic resources that may be eligible for listing in the National Register and/or California Register exist within the EIR Study Area. Therefore, implementation of the proposed project could have the potential to directly impact cultural resources by altering land use regulations that govern these properties or surrounding sites.

The proposed project would allow for an increase in development of various land use types in San Mateo over the planning horizon (2040). Potential impacts from future development on, or adjacent to, historical resources could lead to (1) demolition, which by definition results in the material impairment of a resource's ability to convey its significance; (2) inappropriate modification, which may use incompatible materials, designs, or construction techniques in a manner that alters character-defining features; and (3) inappropriate new construction, which could introduce incompatible new buildings that clash with an established architectural context. For example, the design characteristics and materials of new construction could impact adjoining or nearby historical buildings. Because the EIR Study Area is predominantly built out and new development under the proposed project is expected to be located within the ten General Plan Land Use Study Areas (which, as discussed in Chapter 3, *Project Description*, of this Draft EIR, are already developed), including Downtown, new development projects could occur on or near sites containing historic resources. Development activities under the proposed project therefore have the potential to be incompatible with historical resources, which could be a significant impact.



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Additionally, if new development were to directly impact existing resources, impacts on historical resources could be significant.

Future development under the proposed project would be required to comply with existing federal, State, and local laws and regulations that protect historical resources. On a project-by-project basis, CEQA requires the evaluation and disclosure of significant effects on properties on historical resources listed in the National Register, California Register, or local register, and on properties determined to be significant by the lead agency or eligible for listing in the California Register. Therefore, properties in the EIR Study Area that are listed in or determined to be eligible for listing in the National and California Registers would be categorized as historic resources even if they are not formally landmarked by the City. Future projects would be required to comply with SMMC Chapter 23.36, which adopted the 2022 Edition of California Historical Building Code and its regulations for permitting repairs, alterations, and additions necessary for the preservation, rehabilitation, relocation, related construction, change of use, or continued use of a qualified historical building or structure, as well as SMMC Chapter 27.66, which establishes requirements to insure the preservation and maintenance of the city's historic structures and the Downtown historic district.

The Community Design and Historic Resources (CD) Element and Land Use (LU) Element of the proposed General Plan contains goals, policies, and actions that that require local planning and development decisions to consider impacts to historic resources. The following General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts related to historic resources:

- **Goal CD-5:** Preserve historic and culturally important resources to maintain San Mateo's special identity and continuity with the past.
  - **Policy CD 5.1: Historic Preservation.** Identify and preserve historic resources, including individual properties, districts, and sites to maintain San Mateo's sense of place and special identity, and to enrich our understanding of the city's history and continuity with the past.
  - **Policy CD 5.2: Historic Resources Preservation.** Actively identify and preserve concentrations of historic resources, which convey the flavor of local historical periods, are culturally significant, or provide an atmosphere of exceptional architectural interest or integrity, when they meet national, State, or local criteria.
  - **Policy CD 5.3: Historic Resources Definition.** Define historic resources as buildings, structures, sites, and districts that are listed in or determined to be eligible for listing in the National Register of Historic Places and/or California Register of Historical Resources, designated resources in the 1989 Historic Building Survey Report, and resources found to be eligible through documentation in a historic resources report.
  - **Policy CD 5.4: Public Awareness.** Foster public awareness and appreciation of the City's historic resources and educate the community about how to preserve and improve these resources. Increase public appreciation by supporting groups and organizations that provide neighborhood workshops, public presentations, interpretive signage, and walking tours.
  - **Policy CD 5.5: Historic Resources Renovation and Rehabilitation.** Promote the renovation and rehabilitation of historic resources that conforms to the Secretary of the Interior's Standards for

## CULTURAL RESOURCES

Rehabilitation and Guidelines for Rehabilitating Historic Structures and the California Historical Building Code and prioritize historic structures for available rehabilitation funds.

- **Policy CD 5.6: Historic Preservation Funding.** Pursue and promote historic preservation funding sources to incentivize the protection of historic resources, such as the California Mills Act Property Tax Abatement Program, Federal and State Historic Preservation Tax Incentives Program, and State Historic Rehabilitation Tax Credit Program.
- **Policy CD 5.7: Demolition Alternatives.** Require an applicant to submit alternatives to preserve a historic resource as part of any planning application that proposes full demolition. Implement preservation methods unless health and safety requirements cannot be met or the City Council makes a finding explaining the specific reasons why the social, economic, legal, technical, or other beneficial aspects of the proposed demolition outweigh the unavoidable adverse impacts to the historic resource. If a designated historic resource cannot be preserved, require City approval before the demolition of a historic resource.
- **Action CD 5.8: Historic Resources Context Statements.** Prepare a citywide historic context statement to guide future historic resource survey efforts to identify individually eligible resources and historic districts. If a neighborhood is identified as a historic district, prepare a more detailed historic context statement for that individual neighborhood.
- **Action CD 5.9: Historic Resources Survey.** Establish and maintain an inventory of architecturally, culturally, and historically significant buildings, structures, sites, and districts. Proactively maintain an up-to-date historic resources inventory by seeking funding opportunities to update the historic survey. Prepare neighborhood-specific historic context statements prior to updating the historic resources survey.
- **Action CD 5.10: Historic Preservation Ordinance.** Update the City's Historic Preservation Ordinance to create a framework for the designation of historic resources and districts, establish review and permitting procedures for historic alterations, demolitions or relocations, be consistent with federal and State standards and guidelines, and align with the other goals and policies outlined in this Element.
- **Action CD 5.11: Preservation Incentives.** Explore the option to create incentives to preserve historic and cultural resources, such as reducing parking and other prescriptive requirements, allowing adaptive reuse, or establishing a transfer of development rights program.
- **Action CD 5.12: Historic Resources Design Standards.** Create objective design standards for alterations to historic resources and new development adjacent to historic resources within historic districts. Use the Secretary of the Interior's Standards as the basis for these objective design standards to ensure projects have a contextual relationship with land uses and patterns; spatial organization; visual relationships; cultural and historic values; and the height, massing, design, and materials of historic resources.
- **Action CD 5.13: Certified Local Government.** Explore the feasibility of becoming a Certified Local Government (CLG) to become eligible for federal grant funds and technical assistance in support of historic resource preservation efforts.
- **Goal LU-2: Balance well-designed development with thoughtful preservation.**

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- **Policy LU 2.4: Clustering.** Encourage clustered development where benefits to natural ecology, habitat conservation, and/or preservation of historic resources can be achieved.
- **Goal LU-4:** Maintain downtown San Mateo as the economic, cultural, and social center of the community.
  - **Policy LU 4.2: Quality of Downtown Development.** Promote quality design of all new development that recognizes the regional and historical importance of Downtown San Mateo and strengthens its pedestrian-friendly, historic, and transit-oriented character.
  - **Policy LU 4.3: Significant Historic Structures.** Protect key landmarks, historic structures, and the historic character of Downtown, as defined in the Community Design and Historic Resources Element.

Under CEQA, conformance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties would normally mitigate impacts to a less-than-significant level. Because the proposed General Plan is a program level document, it is not possible to determine whether individual projects under the proposed project would be able to conform with the Secretary of Interior’s Standards. However, CEQA would require that future potential projects permitted under the proposed project with the potential to significantly impact historical resources be subject to project-level CEQA review wherein the future potential project’s potential to affect the significance of a surrounding historical resource would be evaluated and mitigated to the extent feasible. The requirement for subsequent CEQA review, pursuant to state law, would minimize the potential for new development to indirectly affect the significance of existing historical resources to the maximum extent practicable.

Compliance with federal and state laws as described in Section 4.4.1.1, *Regulatory Framework*, SMMC, and the proposed General Plan goals, policies, and actions identified above would ensure future development would not be detrimental or injurious to property or improvements in the vicinity and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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CULT-2	<b>The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.</b>
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Historical and pre-contact archaeological deposits that meet the definition of archaeological resources under CEQA could be damaged or destroyed by ground-disturbing activities associated with potential future development in San Mateo. A substantial adverse change in the significance of an archaeological resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired per CEQA Guidelines Section 15064.5(b)(1). Should this occur, the ability of the deposits to convey their significance, either through containing information important in prehistory or history, or through possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired.

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As discussed in Section 4.4.1.2, *Existing Conditions*, the City has concluded that a majority of the city is in a “low sensitivity” zone wherein archaeological resources are not generally expected. However, the potential exists for the presence of undisturbed archaeological resources throughout the EIR Study Area. Ground-disturbing construction activities (e.g., site preparation, grading, excavation, and trenching for utilities) associated with the proposed project may result in unanticipated discoveries of cultural resources or the damage or destruction of previously undiscovered resources. Development under the proposed project would be largely focused in the ten General Plan Land Use Study Areas, which include areas where current buildings are aging, vacant, or not maintained and areas where property owners have expressed interest in considering redevelopment of the property. Focused development in the General Plan Land Use Study Areas would reduce the potential for disturbing archaeological deposits since ground-disturbing activities have already taken place.

Additionally, the Community Design and Historic Resources (CD) Element of the proposed General Plan provides guidance for the development and physical form of San Mateo and includes actions to help preserve the city’s historic resources as well as archaeological resources. The following General Plan 2040 goal, policies, and actions would serve to minimize potential adverse impacts related to archaeological resources:

- **Goal CD-4:** Protect archaeological and paleontological resources and resources that are culturally significant to Native American tribes and acknowledge San Mateo’s past as indigenous land. Encourage development projects to recognize historical tribal lands.
  - **Policy CD 4.1: Archaeological Resources Protection.** Preserve, to the maximum extent feasible, archaeological sites with significant cultural, historical, or sociological merit for present-day residents or Native American tribes.
  - **Policy CD 4.2: Tribal Cultural Resources.** Preserve areas that have identifiable and important tribal cultural resources and comply with appropriate State and federal standards to evaluate and mitigate impacts to cultural resources, including tribal, historic, archaeological, and paleontological resources.
  - **Policy CD 4.3: Tribal Consultation.** Consult with Native American representatives, including through early coordination, to identify locations of importance to Native Americans, including archaeological sites, sacred sites, traditional cultural properties, and other types of tribal cultural resources. Respect tribal concerns if a tribe has a religious prohibition against revealing information about specific practices or locations.
  - **Policy CD 4.4: Potential Archaeological Impacts.** Consistent with the California Environmental Quality Act (CEQA), prior to construction, consult the California Archaeological Inventory Northwest Information Center for project-specific reviews to evaluate the potential for impact on archaeological resources and determine whether or not further study is warranted.
  - **Policy CD 4.5: On-Site Mitigation.** If development could affect a tribal cultural resource or archaeological resource, require the developer to contact an appropriate tribal representative to train construction workers on appropriate avoidance and minimization measures, requirements for confidentiality and culturally appropriate treatment, other applicable regulations, and consequences of violating State laws and regulations.

## CULTURAL RESOURCES

- **Action CD 4.7: Preconstruction Investigations.** Consistent with CEQA, establish specific procedures for preconstruction investigation of high- and medium-sensitivity sites identified in the 1983 Chavez investigation, unless superseded by more recent investigations, to assist property owners, developers, and the City in making decisions when archaeological resources may be affected.
- **Action CD 4.8: Archaeological Sensitivity Data.** Update and maintain the City's data on areas with high archaeological sensitivity.

Implementation of the proposed project would require the preservation of archaeological and historic resources that are found within the city and would require new development to analyze and avoid any potential impacts to archaeological resources through record searches, pre-construction investigations, and implementation of appropriate measures during construction to avoid identified significant impacts. Compliance with existing federal, State, and local laws and regulations, and the proposed General Plan goal, policies, and actions would protect recorded and unrecorded archaeological deposits in the city. Therefore, implementation of the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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CULT-3	<b>The proposed project would not disturb any human remains, including those interred outside of dedicated cemeteries.</b>
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Previously undiscovered human remains associated with pre-contact archaeological deposits may exist within the EIR Study Area, as ground-disturbing activities sometimes uncover such previously unrecorded remains. As described in impact discussion CULT-2, ground-disturbing activities and excavation for the project would have the potential to uncover buried resources. It is possible that human remains may be present in the EIR Study Area. Descendant communities may ascribe religious or cultural significance to such remains, making any such disturbances a potentially significant impact.

As described in impact discussion CULT-2, the proposed Community Design and Historic Resources (CD) Element of the proposed General Plan contains a goal, policies, and actions that require local planning and development decisions to consider impacts to cultural resources, including human remains resources. Specifically, Policy CD 4.4, *Potential Archaeological Impacts*, requires consultation with the California Archaeological Inventory Northwest Information Center prior to construction for project-specific reviews to evaluate the potential for impact on archaeological resources and determine whether or not further study is warranted. Furthermore, Action CD 4.6, *Pre-Construction Investigations*, aims to establish specific procedure for pre-construction investigation of high and medium sensitivity sites identified in the 1983 Chavez investigation, unless superseded by more recent investigations.

Development under the proposed project would be required to comply with Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code, discussed in Section 4.4.1.1, *Regulatory Framework*. In the event a human burial or skeletal element is identified during excavation or construction, work in that location shall stop immediately until the find can be properly treated. The San Mateo County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner



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shall notify the NAHC within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. If the NAHC is unable to identify an MLD, the MLD fails to make a recommendation within 48 hours after being notified, or the landowner rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance.

Therefore, with the mandatory regulatory procedures and compliance with the proposed General Plan goal, policies, and actions discussed above, potential impacts related to the potential discovery or disturbance of any human remains accidentally unearthed during construction activities associated with future development resulting from implementation of the proposed project would be *less than significant* and no mitigation measures are required.

**Significance without Mitigation:** Less than significant.

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CULT-4	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative cultural resources impacts in the area.
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The impacts of potential future development under implementation of the proposed project on cultural resources tend to be site specific, and cumulative impacts would occur when a series of actions leads to the loss of a substantial type of site, building, or resource. For example, while the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall. For example, changes to the setting or atmosphere of an area by adding modern structures on all sides of a historically significant building, thus altering the aesthetics of the streetscape, would create a significant impact. Destruction or relocation of historic buildings would also significantly impact the setting.

Future development allowed under the proposed project would be primarily within the developed portions of the EIR Study Area. This, in conjunction with buildout of the city and the region, has the potential to cumulatively impact cultural resources. The existing federal, State, and local regulations and proposed General Plan goals, policies, and actions described throughout this chapter serve to protect cultural resources in San Mateo. Continued compliance with these regulations substantially decreases potential impacts to historical resources, archaeological resources, human remains, and tribal cultural resources to the maximum extent practicable. Cumulative impacts related to cultural resources would therefore be *less than significant*.

**Significance without Mitigation:** Less than significant.

## 4.5 ENERGY

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential energy impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. Section 21100(b)(3) of CEQA requires that an EIR include a detailed statement with mitigation measures proposed to minimize significant effects on the environment, including but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the project description, environmental setting, and impact analysis portions of technical sections, as well as through mitigation measures and alternatives.

In accordance with Appendices F and G of the State CEQA Guidelines, this EIR includes relevant information and analyses that address the energy implications of the proposed project. This section summarizes the proposed anticipated energy needs, impacts, and conservation measures associated with future development and activities under the proposed project. The information in this section and other aspects of the proposed General Plan's energy implications are also discussed in Chapter 3, *Project Description*, Chapter 4.2, *Air Quality*, Chapter 4.7, *Greenhouse Gas Emissions*, and Chapter 4.15, *Transportation*, of this Draft EIR.

### 4.5.1 ENVIRONMENTAL SETTING

#### 4.5.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

###### *Federal Energy Policy and Conservation Act*

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of United States crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025 that required a fleet average of 54.5 miles per gallon (MPG) for model year 2025. However, on March 30, 2020, the United States Environmental Protection Agency (USEPA) finalized an updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule

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for Model Years 2021 through 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG for model year 2026 vehicles. On March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards, which will increase fuel efficiency 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which will be a 10 MPG increase relative to model year 2021.<sup>1</sup>

### *Energy Independence and Security Act of 2007*

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The act sets increased CAFE Standards; the Renewable Fuel Standard; appliance energy-efficiency standards; building energy-efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration.<sup>2</sup>

### *Energy Policy Act of 2005*

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

### *National Energy Policy*

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

### *Natural Gas Pipeline Safety Act of 1968*

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well

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<sup>1</sup> National Highway Traffic Safety Administration, April 1, 2022, USDOT Announces New Vehicle Fuel Economy Standards for Model year 2024-2026, <https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026>, accessed October 24, 2022.

<sup>2</sup> United States Environmental Protection Agency, updated May 12, 2022, Summary of the Energy Independence and Security Act, <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>, accessed October 24, 2022.

as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the United States Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

## State Regulations

### *Warren-Alquist Act*

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest edition was in January 2023.

### *California Energy Commission*

The California Energy Commission (CEC) was created in 1974 under the Warren-Alquist Act as the State's principal energy planning organization in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.
- Promote research, development and demonstration.
- Plan for and direct the state's response to energy emergencies.

### *California Public Utilities Commission*

In September 2008, the California Public Utilities Commission (CPUC) adopted the Long-Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020;<sup>3</sup>
- All new commercial construction in California will be zero net energy by 2030;
- Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and

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<sup>3</sup> Zero net energy buildings are buildings that the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy created on the site.

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- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the state's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of state's electricity and gas use.<sup>4</sup>

The CPUC and CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

### *Renewable Portfolio: Carbon Neutrality Regulations*

#### Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill (SB) 1078 and was amended in 2006, 2011, and 2018. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Initially under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S 14 08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the California legislature in 2011 (SB X1-2). The California Public Utilities Commission is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the state.

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<sup>4</sup> California Public Utilities Commission, January 2011, CA Energy Efficiency Strategic Plan, <https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/c/5303-caenergyefficiencystrategicplan-jan2011.pdf>, accessed February 7, 2023.



### Senate Bill 350

Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

### Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which replaces the SB 350 requirements. Under SB 100, the RPS for public owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill also establishes an overall State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

### Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. It requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

### *Energy Efficiency Regulations*

#### Appliance Efficiency Regulations

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.<sup>5</sup>

<sup>5</sup> California Energy Commission, 2017, *2016 Appliance Efficiency Regulations*, <https://pdf4pro.com/cdn/2016-appliance-efficiency-regulations-5104f7.pdf>, accessed February 7, 2023.

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### California Building Energy Code: Title 24, Part 6, Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2022 (California Code of Regulations Title 24, Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020. The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less in height. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements.<sup>6</sup> Under the 2019 standards, nonresidential buildings are generally 30 percent more energy efficient compared to the 2016 standards, and single-family homes are generally 7 percent more energy efficient.<sup>7</sup> When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.<sup>8</sup>

Furthermore, on August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards became effective and replaced the existing 2019 standards on January 1, 2023. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.<sup>9</sup>

### California Building Code: Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code (CBSC). It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier

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<sup>6</sup> California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

<sup>7</sup> California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

<sup>8</sup> California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

<sup>9</sup> California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen update, which was approved as part of 2022 Energy Code became effective on January 1, 2023, and provides updates to the residential and non-residential voluntary measures.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.<sup>10</sup>

### 2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601 through 1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. They contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.

### *Off-road Equipment and Transportation-Related Regulations*

#### Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the CAFE standards under *Federal*, above). In January 2012, the California Air Resources Board approved the Pavley Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single

<sup>10</sup> California Building Standards Commission, July 2022, *2022 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11*, <https://codes.iccsafe.org/content/CAGBC2022P1/copyright>, accessed December 12, 2022.

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package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.<sup>11</sup>

### Title 13, Chapter 9, Article 4.8, Section 2449

Section 2449 of the California Code of Regulations, Title 13, Chapter 9, Article 4.8 was adopted on May 2, 2008 that limits non-essential idling of fleets to no more than five consecutive minutes at any location. This idling restriction applies to all vehicles in California with a diesel-fueled or alternative diesel-fueled off-road engine, unless a waiver provides sufficient justification that such idling is necessary.

### Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Association of Bay Area Governments (ABAG) is the MPO for the Bay Area region, which includes the city of San Mateo. Pursuant to the recommendations of the Regional Transportation Advisory Committee (RTAC), CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

### Executive Order N-79-20

On September 23, 2020, Executive Order N-79-20 was issued, which sets a time frame for the transition to zero-emissions (ZE) passenger vehicles and trucks in addition to off-road equipment. It directs CARB to develop and propose the following:

- Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs (zero-emission vehicles) sold in California toward the target of 100 percent of in-state sales by 2035.
- Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZE by 2035.
- Strategies to achieve 100 percent zero emissions from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the EPA, and local air districts.

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<sup>11</sup> California Air Resources Board, January 18, 2017, California's Advanced Clean Cars Midterm Review, [https://ww2.arb.ca.gov/sites/default/files/2020-01/ACC%20MTR%20Summary\\_Ac.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-01/ACC%20MTR%20Summary_Ac.pdf), accessed May 16, 2022.

On August 25, 2022, CARB adopted the Advanced Clean Cars II (ACC II) regulations that codifies the EO goal of 100 percent of in-state sales of new passenger vehicles and trucks be ZE by 2035. Starting in year 2026, ACC II requires that 35 percent of new vehicles sold be ZE or plug-in hybrids.

### Advanced Clean Fleets Regulation

In April 2023, CARB released the Advanced Clean Fleets (ACF) regulation to accelerate the transition to zero-emission medium- and heavy-duty vehicles.<sup>12</sup> In conjunction with the Advanced Clean Trucks (ACT) regulation, the ACF regulations helps to ensure that medium- and heavy-duty zero-emission vehicles (ZEV) are brought to the market, by requiring certain fleets to purchase ZEVs. The ACF ZEV phase-in approach which provides initial focus where the best fleet electrification opportunities exist, sets clear targets for regulated fleets to make a full conversion to ZEVs, and creates a catalyst to accelerate development of a heavy-duty public infrastructure network.

The ACF regulations covers four main elements:

- **Manufacturer sales mandate.** Manufacturers may sell only zero-emission medium- and heavy-duty vehicles starting in 2036.
- **Drayage fleets.** Beginning January 1, 2024, trucks must be registered in the CARB Online System to conduct drayage activities in California. Non-zero-emission “legacy” drayage trucks may register in the CARB Online System through December 31, 2023. Legacy drayage trucks can continue to operate through their minimum useful life. Beginning January 1, 2024, only zero-emission drayage trucks may register in the CARB Online System. All drayage trucks entering seaports and intermodal railyards would be required to be zero-emission by 2035.
- **High priority and federal fleets.** High priority and federal fleets must comply with the Model Year Schedule or may elect to use the optional ZEV Milestones Option to phase-in ZEVs into their fleets:
  - **Model Year Schedule:** Fleets must purchase only ZEVs beginning 2024 and, starting January 1, 2025, must remove internal combustion engine vehicles at the end of their useful life as specified in the regulation.
  - **ZEV Milestones Option (Optional):** Instead of the Model Year Schedule, fleets may elect to meet ZEV targets as a percentage of the total fleet starting with vehicle types that are most suitable for electrification.
- **State and local agencies.** State and local government fleets, including city, county, special district, and State agency fleets, would be required to ensure 50 percent of vehicle purchases are zero-emission beginning in 2024 and 100 percent of vehicle purchases are zero-emission by 2027. Small government fleets (those with 10 or fewer vehicles) and those in designated counties would start their ZEV purchases beginning in 2027. Alternately, State and local government fleet owners may elect to meet ZEV targets using the ZEV Milestones Option. State and local government fleets may

<sup>12</sup> California Air Resources Board. April 14, 2023. Advanced Clean Fleets Regulation. <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/about>, accessed May 16, 2022.



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purchase either ZEVs or near-ZEVs, or a combination of ZEVs and near-ZEVs, until 2035. Starting in 2035, only ZEVs will meet the requirements.

The ACF regulations would also establish requirements that transform the medium- and heavy-duty vehicle sector and demonstrate independent utility through achievement of the following objectives:

- Achieve criteria and GHG emissions reductions consistent with the goals identified in the State Implementation Plan (SIP) Strategy and Scoping Plan.
- Provide emissions reductions in disadvantaged communities (DAC), thereby supporting the implementation of Assembly Bill (AB) 617 (Garcia, C., Chapter 136, Statutes of 2017).
- Support the goals of Executive Order N-79-20 which calls for accelerated ZEV deployment with these targets:
  - 100 percent ZE drayage by 2035
  - 100 percent ZE trucks and buses where feasible by 2045
- Ensure requirements, such as ZEV deployment schedules and related infrastructure build-out, are technologically feasible, cost-effective, and support market conditions.
- Lead the transition away from petroleum fuels and towards electric drivetrains.
- Contribute towards achieving carbon neutrality in California pursuant to Senate Bill (SB) 100, and in accordance with Executive Order B-55-18.
- Mindfully set requirements to allow time for public ZE infrastructure buildout for smaller fleets or for regional haul applications who would be reliant on a regional network of public chargers.
- Ensure manufacturers and fleets work together to place ZEVs in service suitably and successfully as market expands.
- Establish a fair and level playing field among fleet owners.
- Craft the Proposed Project in a way that ensures institutional capacity for CARB to manage, implement, and enforce requirements.

### *Energy Storage*

California has set ambitious long-term goals for energy storage beyond 2026 to support its clean energy and climate goals. The state aims to reach 100 percent carbon-free electricity by 2045, which will require significant investment in renewable energy sources like wind and solar, as well as energy storage technologies to balance the variability of these sources.

The California Independent System Operator (CAISO) has a total energy storage capacity of more than 3,160 megawatts (MW) as of June 2022.<sup>13</sup> This includes both large-scale and distributed energy storage systems, such as batteries, pumped hydroelectric storage, and thermal storage. CAISO is responsible for managing the electricity grid for much of California, and it has set a target of adding 3,300 MW of additional energy storage capacity by 2024 to support the integration of more renewable energy sources like wind and solar. As part of SB 100, load serving entities (LSEs) were required to procure no less than

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<sup>13</sup> California Independent System Operator, June 14, 2022, "A golden age of energy storage," <http://www.caiso.com/about/Pages/Blog/Posts/A-golden-age-of-energy-storage.aspx>, accessed May 17, 2023.

1.3 gigawatts (GW) of energy storage capacity by 2020, and 3 GW by 2030. Additionally, the CPUC has established a target of 15 GW of energy storage capacity by 2030.<sup>14</sup>

### The Integrated Resource Plan (IRP)

CAISO develops a coordinated grid management plan to integrate the generation and storage capacities of LSEs, called the Integrated Resource Plan (IRP). The IRP is a comprehensive planning document that outlines CAISO's forecasts for electricity demand, supply, and transmission needs over a 20-year planning horizon, as well as its strategies for integrating renewable energy resources and other grid services to meet those needs. The plan is developed in collaboration with LSEs, regulators, and other stakeholders, and is updated periodically to reflect changes in the energy landscape and evolving policy goals. Overall, the IRP plays a critical role in ensuring the reliability and resilience of California's electricity grid as the state continues to transition to a cleaner and more sustainable energy system.

When an individual Battery Energy Storage (BES) facility or generation infrastructure (i.e., solar panels) comes online in California, it is typically included in the IRP through a process known as the Interconnection Queue. The Interconnection Queue is managed by the CAISO, which oversees the operation of the State's electricity grid.

### The Interconnection Queue

The Interconnection Queue is an application process that functions as a waiting list of proposed electricity generation and storage projects that are seeking to connect to the grid. When a new BES facility or generation infrastructure is proposed, the developer submits an application to CAISO to request an interconnection to the grid. CAISO evaluates the application to ensure that the facility meets technical and operational requirements, such as voltage regulation and frequency response, and that it can be integrated effectively into the grid.

Once the BES facility or generation infrastructure is approved by CAISO, it is assigned a point of interconnection on the grid, and its output is added to the IRP as a resource that can provide electricity and other grid services, such as frequency regulation or ramping support. The facility is then dispatched by CAISO based on its bids into the day-ahead and real-time electricity markets, and its output is used to help balance supply and demand on the grid in real-time.

Overall, the Interconnection Queue is an important mechanism for integrating new BES facilities and other electricity resources into the California grid, and for ensuring that the grid remains reliable and resilient as the state continues to transition to a cleaner and more sustainable energy system.

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<sup>14</sup> California Public Utilities Commission, December 1, 2022, CPUC Creates New Framework to Advance California's Transition Away From Natural Gas, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report>, accessed May 17, 2023.

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### Regional Regulations

#### *Plan Bay Area: Strategy for a Sustainable Region*

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 on October 21, 2021.<sup>15</sup> Plan Bay Area 2050 provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Under the Plan Bay Area 2050 strategies, just under half of all Bay Area households would live within one half-mile of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19-percent reduction in per-capita emissions by 2035 — but only if all strategies are implemented.<sup>16</sup>

To achieve MTC's/ABAG's sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. Parts of the City of San Mateo lies within identified PDAs.<sup>17</sup>

#### *Bay Area Clean Air Plan*

BAAQMD adopted the 2017 Clean Air Plan, Spare the Air, Cool the Climate on April 19, 2017. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.

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<sup>15</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, 2021, October. Plan Bay Area 2050. [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed May 23, 2023.

<sup>16</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, 2021, October. Plan Bay Area 2050. [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed May 23, 2023.

<sup>17</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, May 2023 (updated), Priority Development Areas, <https://opendata-mtc.opendata.arcgis.com/datasets/4df9cb38d77346a289252ced4ffa0ca0/explore?location=37.892240%2C-122.289021%2C9.00>.

- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.<sup>18</sup>

A comprehensive multipollutant control strategy has been developed to be implemented in the next 3 to 5 years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of “super-GHGs” such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.

## City/County Association of Governments of San Mateo County

The City/County Association of Governments (C/CAG) of San Mateo County is responsible for providing countywide transportation planning. In San Mateo County, C/CAG is the Congestion Management Agency tasked with preparing the Congestion Management Plan (CMP) that describes the strategies to address congestion problems and monitoring compliance. C/CAG works cooperatively with MTC, transit agencies, local governments, Caltrans and BAAQMD. The CMP contains Level of Service (LOS) standards for roadway segments and intersections, a capital improvement program, a program for analyzing land use decisions, and a transportation demand management (TDM) program.<sup>19</sup> The CMP roadway system comprises of 53 roadway segments and 16 intersections.

## Local Regulations

### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to energy are primarily in the Urban Design Element. As part of the proposed General Plan, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added.

<sup>18</sup> Bay Area Air Quality Management District (BAAQMD), 2017, Spare the Air: Cool the Climate, Final 2017 Clean Air Plan, [https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf?la=en](https://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 May 23, 2023.

<sup>19</sup> City/County Association of Governments of San Mateo County, December 2021, *Congestion Management Program: Final Report*, [https://ccag.ca.gov/wp-content/uploads/2022/01/258-018-San-Mateo-CMP-Report\\_Final.pdf](https://ccag.ca.gov/wp-content/uploads/2022/01/258-018-San-Mateo-CMP-Report_Final.pdf), accessed July 29, 2022.

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Applicable goals and policies are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.5.3, *Impact Discussion*.

### *2020 Climate Action Plan*

Adopted in April 2020, the current San Mateo CAP is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.<sup>20</sup> The CAP allows City decision-makers and the community to understand the sources and magnitude of local GHG emissions and identifies a strategy, reduction measures, and implementation actions the City will use to achieve targets consistent with State recommendations of 15 percent below 2005 emissions levels by 2020, 4.3 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) per person by 2030, and 1.2 MTCO<sub>2</sub>e per person by 2050. The CAP, adopted in 2020, updated and expanded the City's goals, measures, and actions to address GHG emissions from the energy, water, transportation, solid waste, and off-road equipment sectors. It also revises San Mateo's implementation program and framework to monitor and report progress. A technical update to the CAP, which builds on the existing CAP's emission reduction strategies and updates the emissions inventory and forecast to align with current legislative reduction targets established by SB 32 and AB 1279, has been conducted as part of the proposed project.

### *City of San Mateo Municipal Code*

The SMMC includes various directives pertaining to energy. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to energy impacts are included in Title 23, *Buildings and Construction*.

- Chapter 23.12, *Electrical Code*, adopts the 2022 California Electrical Code as the rules, regulations, and standards within the City as to all matters except as modified or amended in the SMMC.
- Chapter 23.24, *Energy Code*, adopts the 2022 edition of the California Energy Code, and includes amendments regarding mandatory solar installations, all-electric requirements and energy efficiency standards.
- Chapter 23.44, *Electrical Vehicle Charging Stations*, outlines the requirements and submittal process of an electric vehicle charging permit application.
- Chapter 23.70, *Green Building Code*, adopts the 2022 edition of the California Green Building Standards Code, and includes local amendments regarding electric vehicle charging and space design for different types of new constructions.

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<sup>20</sup> City of San Mateo, April 2020, *2020 Climate Action Plan*, [cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=](http://cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=), accessed May 25, 2023.



## 4.5.1.2 EXISTING CONDITIONS

### Electricity and Natural Gas

Electricity is quantified using kilowatts (kW) and kilowatt-hours (kWh), and natural gas is measured in therms. A therm is a measurement of the amount of heat energy in natural gas, equal to 100,000 British thermal units (BTUs). The volumetric billing unit used for natural gas delivered to customers is typically expressed in hundreds of cubic feet (Ccf)—approximately 0.01 therm per Ccf—or thousands of cubic feet (Mcf)—approximately 10.37 therms per Mcf.<sup>21</sup> A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for one hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the CEC’s “Tracking Progress” regarding statewide energy demand, total electric energy usage in California was 280,738 gigawatt hours in 2021.<sup>22</sup> A gigawatt is equal to one million kilowatts.

### Energy Providers

Two energy providers, Peninsula Clean Energy (PCE) and Pacific Gas & Electric (PG&E), serve the EIR Study Area, as described below.

#### *Peninsula Clean Energy (PCE)*

PCE was created as a Community Choice Aggregation (CCA) program by San Mateo County in 2016 and all of its cities and town, and was joined by the City of Los Banos in 2020.<sup>23</sup> PCE aims to provide electricity that is 100 percent renewable or carbon-free by 2025. PCE provides two different production options for electricity: ECOplus and ECO100.

Sources of electricity sold by PCE under the ECOplus plan in 2021, the latest year for which data are available, were:<sup>24</sup>

- 49.2 percent renewable, consisting mostly of solar and wind
- 50.8 percent large hydroelectric

Customers are automatically enrolled in ECOplus but have the option of opting up to ECO100, which provides 100 percent renewable and carbon-free electricity.<sup>25</sup> Conversely, customers have the option to opt-out of PCE renewable energy sources and receive their energy service from PG&E. PG&E is responsible for maintaining transmission lines, handling customer billing, and responding to new service requests and emergencies within the PCE service area.

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<sup>21</sup> United States Energy Information Administration, June 1, 2021, Frequently Asked Questions (FAQs), <https://www.eia.gov/tools/faqs/faq.php?id=45&t=7>, accessed May 25, 2023.

<sup>22</sup> California Energy Commission, Electricity Consumption by Planning Area, <http://www.ecdms.energy.ca.gov/elecbyplan.aspx>, accessed February 20, 2023.

<sup>23</sup> Peninsula Clean Energy, Background, <https://www.peninsulacleanenergy.com/background/>, accessed February 7, 2023.

<sup>24</sup> Peninsula Clean Energy, 2021 Energy Mix, <https://www.peninsulacleanenergy.com/power-mix/>, accessed February 7, 2023.

<sup>25</sup> Peninsula Clean Energy, Energy Choices, <https://www.peninsulacleanenergy.com/energy-choices/>, accessed February 7, 2023.

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### *Pacific Gas and Electric Company*

#### Electricity

PG&E is a publicly traded utility company which generates, purchases, and transmits energy and natural gas under contract with the CPUC. PG&E's service territory is 70,000 square miles, roughly extending north to Eureka, south to Bakersfield, west to the Pacific Ocean, and east to the Sierra Nevada mountain range. PG&E's electricity distribution system consists of 106,681 circuit-miles of electric distribution lines and 18,466 circuit-miles of interconnected transmission lines.<sup>26</sup> PG&E owns and maintains above-ground networks of electric transmission and distribution facilities throughout the EIR Study Area.

PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants, also known as solar farms. The bulk electric grid (collectively referred to as "The Grid") is a network of high-voltage transmission lines, linked to power plants within the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

#### Natural Gas

PG&E gas transmission pipeline systems serve approximately 4.5 million gas customers in northern and central California.<sup>27</sup> The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. PG&E also adopted Pipeline 2020 program, which aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders. Total natural gas consumption in PG&E's service area was 449,302,071,200 kilo-BTU (KBTU) for 2021.<sup>28</sup>

In 2021, roughly half of PG&E's energy generated came from renewable resources including biopower, geothermal, small hydroelectric, solar, and wind power. PG&E's portfolio consist of 7 percent natural gas, 39 percent non-emitting nuclear generation, 4 percent large hydroelectric facilities, and 50 percent eligible renewable energies, which includes small hydroelectric and wind.<sup>29</sup>

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<sup>26</sup> Pacific Gas and Electric Company, 2023, *Company profile*. [https://www.pge.com/en\\_US/about-pge/company-information/profile/profile.page](https://www.pge.com/en_US/about-pge/company-information/profile/profile.page), accessed May 18, 2023.

<sup>27</sup> Pacific Gas and Electric Company, 2022. *Company profile*. [https://www.pge.com/en\\_US/about-pge/company-information/profile/profile.page](https://www.pge.com/en_US/about-pge/company-information/profile/profile.page), accessed May 18, 2023.

<sup>28</sup> California Energy Commission, 2021, Gas Consumption by Planning Area. <http://www.ecdms.energy.ca.gov/gasbyplan.aspx>, accessed May 18, 2023.

<sup>29</sup> Pacific Gas & Electric Company, 2022, Exploring clean energy solutions, [https://www.pge.com/en\\_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page#:~:text=In%202021%2C%20roughly%20half%20of,nuclear%20and%20large%20hydroelectric%20power.,](https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page#:~:text=In%202021%2C%20roughly%20half%20of,nuclear%20and%20large%20hydroelectric%20power.,) accessed May 18, 2023.

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PG&E and PCE's together provide electrical services in San Mateo. PG&E is the sole provider for natural gas services to the city. PG&E provides distribution of electrical services to the city, while PCE provides the electrical commodity. PCE works in conjunction with PG&E to provide electricity to consumers through the use of PG&E's distribution infrastructure and network. Both utilities are regulated by CPUC.

The existing electricity and natural gas consumption attributable to nonresidential and residential land uses in the City of San Mateo is shown in Table 4.5-1, *Estimated Existing Electricity and Natural Gas Demand*.

**TABLE 4.5-1 ESTIMATED EXISTING ELECTRICITY AND NATURAL GAS DEMAND**

Parameter	Electricity Usage (kWh/year) <sup>a</sup>	Natural Gas Usage (Therms/year) <sup>a</sup>
Residential	196,275,977	16,052,739
Nonresidential	339,037,558	9,376,292
<b>Total</b>	<b>535,313,535</b>	<b>25,429,031</b>
2019 Service Population <sup>b</sup>		170,460
<b>Per Service Population Consumption</b>	<b>3,140</b>	<b>149</b>

Notes:

a. Based on electricity and natural gas usage inventory as part of the development for the 2023 Climate Action Plan.

b. Service population = residents + jobs.

Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

### Fuel Consumption

California is among the top producers of petroleum in the country, with crude oil pipelines throughout the state connecting to oil refineries in the Los Angeles, the San Francisco Bay, and the Central Valley regions. In addition to producing petroleum, California is also one of the top consumers of fuel for transportation. With this sector accounting for approximately 35 percent of California's total energy demand in 2020, amounting to approximately 2,355.5 trillion BTUs.<sup>30</sup> In addition, in 2020, California's transportation sector consumed approximately 433 million barrels of petroleum fuels.<sup>31</sup>

Furthermore, according to the California Energy Commission, California's 2019 fuel sales were approximately 15,365 million gallons of gasoline and 1,756 million gallons of diesel.<sup>32</sup> In San Mateo County, approximately greater than 322 million gallons of gasoline and 38 million gallons of diesel fuel were sold in 2019.<sup>33</sup>

<sup>30</sup> United States Energy Information Administration, 2020, *Table F33: Total Energy Consumption, Price, and Expenditure Estimates*, [https://www.eia.gov/state/seds/sep\\_fuel/html/pdf/fuel\\_te.pdf](https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_te.pdf), accessed May 18, 2023.

<sup>31</sup> United States Energy Information Administration, 2020, *Table F16: Total Petroleum Consumption Estimates*, [https://www.eia.gov/state/seds/sep\\_fuel/html/pdf/fuel\\_te.pdf](https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_te.pdf), accessed May 18, 2023.

<sup>32</sup> California Energy Commission, 2023, *California Retail Fuel Outlet Annual Reporting (CEC-A15) Results*, <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>, accessed May 18, 2023.

<sup>33</sup> California Energy Commission, 2023, *California Annual Retail Fuel Outlet Report Results (CEC-A15)*, <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>, accessed May 18, 2023.

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Table 4.5-2, *Existing Operation-Related Annual Vehicles Miles Traveled*, shows the estimated annual vehicle miles traveled (VMT) currently generated under existing baseline conditions. VMT is based on vehicle trips beginning and ending in the EIR Study Area and from external/internal trips (i.e., trips that either begin or end in the EIR Study Area).

**TABLE 4.5-2 EXISTING OPERATION-RELATED ANNUAL VEHICLE MILES TRAVELED**

Gas VMT <sup>a</sup>	Diesel VMT <sup>a</sup>	Compressed Natural Gas VMT <sup>a</sup>	Electricity VMT <sup>a</sup>
663,327,020	25,765,890	431,400	15,195,810

Note:

a. Based on VMT analysis as part of the development for the proposed Climate Action Plan update.

Source: EMFAC2021, version 1.0.2. See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

### 4.5.2 STANDARDS OF SIGNIFICANCE

The proposed General Plan would result in a significant energy impact if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.
3. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to energy.

To determine whether the proposed General Plan would result in wasteful, inefficient, or unnecessary consumption of energy resources, this analysis utilizes the guidance provided in Appendix F of the CEQA Guidelines as well as the analytical precedent set by *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5<sup>th</sup> 63, 164-168).

According to Appendix F of the CEQA Guidelines, the goal of conserving energy is translated to include decreasing overall per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy sources. In *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5<sup>th</sup> 63, 164-168), the Appellate Court concluded that the analysis of wasteful, inefficient, and unnecessary energy consumption was not adequate because it did not consider whether additional renewable energy features could be added to the project.

The proposed General Plan would be considered to result in a potentially significant impact if it would result in wasteful, inefficient, or unnecessary consumption of energy resources. Considering the guidance provided by Appendix F of the CEQA Guidelines and the Appellate Court decision in *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5<sup>th</sup> 63, 164-168), the proposed General Plan would be considered to result in wasteful, inefficient, or unnecessary consumption of energy resources if it would conflict with the following energy conservation goals:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, or oil; and
- Increasing reliance on renewable energy sources.

The following is a summary of the assumptions used for the City's energy analysis:

- **Energy (Natural Gas and Electricity):** Energy use for residential and nonresidential land uses in the city were modeled using electricity and natural gas data provided by PG&E and PCE. Residential energy and non-residential energy forecasts are adjusted for increases in housing units and employment, respectively.
- **On-Road Fuel Use:** Daily VMT was used as an indicator of fuel use and was based on Origin-Destination Method VMT provided by Kittelson and Associates (see Chapter 4.15, *Transportation*, of this Draft EIR). The VMT provided includes the full trip length for land uses in the City (origin-destination approach) and a 50 percent reduction in the trip length for external-internal/internal-external trips, consistent with the recommendations of CARB's Regional Targets Advisory Committee. Annual VMT was based on the VMT analysis as part of the development for the 2023 Climate Action Plan. Due to varying conditions that influence fuel consumption, such as vehicle fuel type and fuel economy, VMT generation is utilized herein as a performance metric to measure anticipated fuel consumption during baseline (2019) and future (2040) conditions. At the programmatic level, it is speculative to discuss the specific types of vehicles and fuels that would be used and consumed during operation of future development and activities under the proposed project.

### 4.5.3 IMPACT DISCUSSION

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ENE-1	The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
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#### Short-Term Construction Impacts

Future development projects under the proposed project would create temporary demands for electricity. Natural gas is not generally required to power construction equipment, and therefore is not anticipated during construction phases. Electricity use would fluctuate according to the phase of construction. Additionally, it is anticipated that most electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities.

Construction of development projects facilitated by the proposed General Plan would also temporarily increase demands for energy associated with transportation. Transportation energy use depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. Energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. It is anticipated that most off-road construction equipment, such as those used during demolition and grading, would be gas or diesel powered. In addition, all operation of construction equipment would cease upon completion of project construction. Furthermore, the construction contractors would be required to minimize nonessential idling of construction equipment during



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construction in accordance with the California Code of Regulations Title 13, Chapter 9, Article 4.8, Section 2449. Such required practices would limit wasteful and unnecessary energy consumption.

Also, future projects within the EIR Study Area would be similar to projects currently in development within the EIR Study Area. Overall, there would be no unusual project characteristics anticipated that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of California. Therefore, short-term construction activities that occur as a result of implementation of the proposed General Plan would not result in inefficient, wasteful, or unnecessary fuel consumption.

### Long-Term Impacts During Operation

#### *Decreasing Overall Per Capita Energy Consumption*

Operation of future development under the proposed project would create additional demands for electricity and natural gas compared to existing conditions. Operational use of electricity and natural gas would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; use of on-site equipment and appliances; lighting; and charging electric vehicles. Land uses under the proposed General Plan would also result in additional demands for transportation fuels (e.g., gasoline, diesel, compressed natural gas, and electricity) associated with on-road vehicles.

#### Building Electricity

Electrical service to the EIR Study Area is provided by PG&E and PCE through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.5-3, *Year 2040 Forecast Electricity Consumption*, by horizon year 2040, electricity use in the EIR Study Area would increase by 177,799,653 kWh/year, or approximately 33 percent, from existing conditions.

**TABLE 4.5-3 YEAR 2040 FORECAST ELECTRICITY CONSUMPTION**

Land Use	Electricity Usage (kWh/year) <sup>a</sup>		
	Existing Conditions	Proposed General Plan	Net Change
<b>City</b>			
Residential	190,128,160	286,083,820	95,955,660
Nonresidential	333,200,500	413,129,990	79,929,490
<b>SOI</b>			
Residential	6,147,817	6,195,622	47,805
Nonresidential	5,837,058	7,703,756	1,866,698
<b>Total</b>	<b>535,313,535</b>	<b>713,113,188</b>	<b>177,799,653</b>
<b>Service Population</b>	170,460	239,400	68,940
<b>Per Service Population Annual Consumption</b>	<b>3,140</b>	<b>2,979</b>	<b>-161</b>

Note:

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

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As a result, the per service population electricity consumption was estimated to decrease from 3,140 kWh per person per year in 2019 to 2,979 kWh per person per year in 2040, or a reduction of approximately 161 kWh annually. The 2040 electricity consumption estimates reflect the electricity consumption rates of the existing community which is made up of a building stock that consists of varying ages and energy efficiency performances. The EIR Study Area is largely built out and net new development would largely occur through the renovation, expansion, and replacement of existing development. All new development facilitated by the proposed General Plan would be required to demonstrate compliance with the California Building Energy Efficiency Standards and CALGreen standards in effect at the time the individual development applications are submitted and can therefore be expected to be more energy-efficient than the use being replaced, resulting in reductions in electricity consumption on a per dwelling unit and per square foot basis when compared to existing development. It should be noted that it is unknown how much more energy-efficient future iterations of the California Building Energy Efficiency Standards and CALGreen would be in 2040 compared to existing conditions as those code updates are released on a 3-year cycle.

The Land Use (LU) and Community Design and Historic Resources (CD) Element of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider energy efficiency and impacts. The following General Plan 2040 goals and policies would serve to improve energy efficiency and reduce energy:

- **Goal LU 10:** Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.
  - **Policy LU 10.2: Decarbonized Building Stock.** Eliminate the use of fossil fuels as an energy source in all new building construction and reduce the use of fossil fuels as an energy source in the existing building stock at the time of building alteration through requirements for all-electric construction.
- **Goal CD-6:** Develop and maintain an attractive urban fabric that reflects San Mateo's unique visual and architectural character.
  - **Policy CD 6.3: Sustainable Design.** Encourage integration of sustainable design features and elements into the design of new buildings, including locating and orienting buildings to access solar exposure, preserving mature vegetation to the extent feasible, and using green building materials.

As a result of compliance with Title 24 energy efficiency standards and implementation of the above General Plan goals and policies, per service population building electricity consumption is expected to decrease in 2040 compared to existing conditions.

### Building Natural Gas

As shown in Table 4.5-4, *Year 2040 Forecast Natural Gas Consumption*, natural gas use under the proposed project is estimated to total 35,820,745 therms annually. While the City currently has a reach code requiring all-electric building designs for most new projects (SMMC Section 23.70.060), it cannot be guaranteed that every individual development project facilitated by the proposed project would be subject to this requirement. To provide a conservative assessment of what energy consumption may be

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in 2040 resulting from implementation of the proposed project, the new growth in building space anticipated through 2040 was assumed to include natural gas for space and water heating. With this assumption, by 2040, natural gas use in the EIR Study Area would increase by 10,391,714 therms annually, or approximately 41 percent, from existing conditions. As a result, the per service population natural gas consumption is estimated to slightly increase from 149 therms per person per year in 2019 to 150 therms per person per year in 2040 for natural gas. As described above, this number can be considered to represent a conservative (i.e., “worst case” scenario) as many projects in the city would be subject to the reach code’s all-electric requirements.

**TABLE 4.5-4 YEAR 2040 FORECAST NATURAL GAS CONSUMPTION**

Land Use	Natural Gas Usage (Therms per year) <sup>a</sup>		
	Existing Conditions	Proposed General Plan	Net Change
<b>City</b>			
Residential	15,549,930	23,397,810	7,847,880
Nonresidential	9,195,040	11,677,000	2,481,960
<b>SOI</b>			
Residential	502,809	506,719	3,910
Nonresidential	181,252	239,216	57,964
<b>Total</b>	<b>25,429,031</b>	<b>35,820,745</b>	<b>10,391,714</b>
<b>Service Population</b>	170,460	239,400	68,940
<b>Per Service Population Annual Consumption</b>	<b>149</b>	<b>150</b>	<b>1</b>

Note:

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR

Similar to electricity consumption, all new development facilitated by the proposed General Plan would be required to demonstrate compliance with the current California Building Energy Efficiency Standards and CALGreen and would result in reductions in heating fuel (i.e., natural gas or propane) consumption on a per dwelling unit and per square foot basis when compared to existing development in the city. Moreover, General Plan Policies LU 10.2 and CD 6.3 would serve to improve energy efficiency and reduce energy consumption in new development facilitated by the proposed General Plan. As a result, per service population heating fuel consumption is expected to decrease in 2040 compared to existing conditions; however, as shown in Table 4.5-4, the proposed project would result in a slight increase in per service population natural gas consumption rates by 1 therm annually, largely due to the growth in nonresidential development envisioned by the proposed project.

### Transportation Energy

The growth accommodated under the General Plan 2040 would consume transportation energy from the use of motor vehicles (e.g., gasoline, diesel, compressed natural gas, electricity). As shown in Table 4.5-5, *Year 2040 Forecast Miles Traveled*, implementation of the proposed General Plan would increase daily VMT from 3,918,221 in 2019 to 5,108,862 vehicle miles per day in 2040 in the EIR Study Area, or an increase of approximately 30 percent. Service population would also increase under the proposed project, from approximately 170,460 people to 239,400 people, or an increase of approximately 40

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percent. As a result, per person daily VMT would decrease from approximately 22.99 miles traveled to approximately 21.34 miles traveled daily.

**TABLE 4.5-5 YEAR 2040 FORECAST MILES TRAVELED**

Land Use	Existing Conditions	Proposed General Plan	Net Change
<b>Gasoline</b>			
VMT <sup>a</sup>	663,327,020	254,218,670	-409,108,350
<b>Diesel</b>			
VMT <sup>a</sup>	25,765,890	2,220,010	-23,545,880
<b>Compressed Natural Gas</b>			
VMT <sup>a</sup>	431,400	13,350	-418,050
<b>Electricity</b>			
VMT <sup>a</sup>	15,195,810	536,126,360	520,930,550
<b>Total VMT</b>	<b>704,720,120</b>	<b>792,578,390</b>	<b>87,858,270</b>
<b>VMT per Day <sup>b</sup></b>	<b>3,918,221</b>	<b>5,108,862</b>	<b>1,190,641</b>
<b>Service Population</b>	<b>170,460</b>	<b>239,400</b>	<b>68,940</b>
<b>VMT/SP</b>	<b>22.99</b>	<b>21.34</b>	<b>-1.65</b>

Note:

a. Daily VMT was based on VMT analysis as part of the development for the 2023 Climate Action Plan.

b. Daily VMT is provided by Kittelson and Associates, Inc. 2023 VMT from passenger vehicles and trucks that have an origin or destination in the city using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee created under Senate Bill 375.

Source: Based as part of the Climate Action Plan GHG inventory and forecast analysis, See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As previously stated under Section 4.5.2.1, *Methodology*, due to varying conditions that influence fuel consumption, such as vehicle fuel type and fuel economy, VMT generation is utilized herein as a performance metric to measure anticipated fuel consumption during baseline (2019) and future (2040) conditions.

As identified, the proposed project would result in a decrease in daily per person VMT under future (2040) conditions than under existing conditions. As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed General Plan includes land use designations, goals, policies, and actions that will help reduce VMT and therefore reduce emissions from automobiles. Please see the impact discussion in Chapter 4.15 for a complete list of these goals, policies, and actions.

Furthermore, the average vehicle fuel economy would improve between 2019 and 2040 as vehicle manufacturers comply with CAFE standards and other fuel economy standards, resulting in lower transportation energy consumption per mile traveled. Therefore, it is anticipated that per person transportation energy consumed would decrease over time as vehicles' fuel efficiency improves.

As show in Table 4.5-3 and Table 4.5-4, the proposed project would result in a decrease in per service population electricity consumption rate of approximately 161 kWh per year and a slight increase in per service population natural gas consumption rate of approximately 1 therm per year. Moreover, as shown in Table 4.5-5, per service population VMT generation would decrease by an estimated 1.65 miles daily from 2019 to 2040 and, combined with improvements in fuel economy standards through 2040, the

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proposed project would result in a decrease in transportation energy consumption. As a result, the proposed project would result in an overall decrease in energy consumption through 2040.

### *Decreasing Reliance on Fossil Fuels*

The proposed General Plan would be considered to conflict with this criterion if it did not take steps to decrease the reliance on fossil fuels. As discussed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, individual development projects under the proposed project would be required to comply with the CBSC current at the time of their building application submittal, including the California Building Energy Efficiency Standards and CALGreen. As the current CBSC is the 2022 CBSC, individual development projects going through the application process today would result in greater energy efficiency than the current performance of existing structures in the city. In addition, the 2022 CBSC currently includes provisions for development projects to include rooftop photovoltaic systems and battery energy storage (BES) infrastructure or demonstrate energy efficiency performance equivalent to including photovoltaic and BES features.

In addition to improvements in energy efficiency and on-site renewable energy generation and energy storage standards, SB 100 requires that LSEs incrementally increase their energy procurement sources to include eligible renewable and carbon-free sources. By January 1, 2046, all LSEs in California are required to source 100 percent of their in-state electricity sales from renewable and carbon-free sources. As a result, individual development projects accommodated by the proposed General Plan would improve their energy efficiency through compliance with the CBSC current at the time of their building application submittal and LSEs would supply electricity that is increasingly sourced from carbon-free sources. Moreover, consistent with Executive Order N-79-20 and CARB's Advanced Clean Cars II Regulation, which require that 100 percent of in-state vehicle sales starting in 2035 are electric or hybrid electric, vehicles utilized by future residents and employees accommodated by the proposed General Plan are expected to consist more of EVs than what is experienced under existing conditions. In addition, the proposed General Plan includes policies and actions that are intended to reduce the use of nonrenewable energy. Specifically, proposed Policy LU 10.2 and Action LU 10.10, listed above, encourage the reduction of nonrenewable energy use and the development and utilization of new energy sources and building electrification. As a result, the proposed project would incrementally decrease reliance on fossil fuel energy resources through 2040.

### *Increasing Reliance on Renewable Energy*

As discussed above, the 2022 CBSC currently includes provisions for development projects to include rooftop photovoltaic systems and battery energy storage (BES) infrastructure or demonstrate energy efficiency performance equivalent to including photovoltaic and BES features. In addition, it is anticipated that each new code cycle for the CBSC improves on the last one and requires higher performance for energy efficiency and incorporates additional requirements for on-site renewable energy and EV charging infrastructure. Future development projects under the proposed project would therefore result in a net increase from existing conditions in on-site photovoltaic electricity generation and EV charging stations and associated infrastructure, further supporting and accelerating the adoption of EVs and the use of renewable energy in future years.



Similarly, LSEs that serve future development projects under the proposed project, such as PG&E and PCE, would be required to incrementally increase their energy procurement sources to include eligible renewable and carbon-free sources through 2045 under SB 100. As a result, electricity consumed by individual development projects under the proposed project as well as existing structures in the EIR Study Area would rely more on renewable and carbon-free sources for electricity in future years than is experienced under existing conditions.

The Circulation (C) and Land Use (LU) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider renewable resources and active modes of transportation. The following General Plan 2040 goals and policies would support the use of renewable energy resources:

- **Goal C-1:** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.
  - **Policy C 1.1: Sustainable Transportation.** Reduce greenhouse gas (GHG) emissions from transportation by increasing mode share options for sustainable travel modes, such as walking, bicycling, and public transit.
  - **Policy C 1.2: Complete Streets.** Apply complete streets design standards to future projects in the public right-of-way and on private property. Complete streets are streets designed to facilitate safe, comfortable, and efficient travel for all users regardless of age or ability or whether they are walking, bicycling, taking transit, or driving, and should include landscaping and shade trees as well as green streets stormwater infrastructure to reduce runoff and pollution.
  - **Policy C 1.4: Prioritize Pedestrian and Bicycle Mobility Needs.** Prioritize local pedestrian and bicycle projects that enhance mobility, connectivity, and safety when designing roadway and intersection improvements.
  - **Policy C 1.6: Transit-Oriented Development.** Increase access to transit and sustainable transportation options by encouraging high-density, mixed-use transit-oriented development near the City's Caltrain stations and transit corridors.
  - **Policy C 1.9: Dedication of Right-of-Way for Transportation Improvements.** Require dedication of needed right-of-way for transportation improvements identified in adopted City plans, including pedestrian facilities, bikeways, and trails.
- **Goal C-2:** Use transportation demand management (TDM) to reduce the number and length of single-occupancy vehicle trips through policy, zoning strategies, and targeted programs and incentives.
  - **Policy C 2.1: TDM Requirements.** Require new or existing developments that meet specific size, capacity, and/or context conditions to implement TDM strategies.
- **Goal C-3:** Build and maintain a safe, connected, and equitable pedestrian network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.

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- **Policy C 3.1: Pedestrian Network.** Create and maintain a safe, walkable environment in San Mateo to increase the number of pedestrians. Maintain an updated recommended pedestrian network for implementation. Encourage “superblock” or similar design in certain nodes of the city, such as the downtown, that allows vehicle access at the periphery and limits cut-through vehicles to create pedestrian-focused, car-light spaces.
- **Policy C 3.2: Pedestrian Enhancements with New Development.** Require new development projects to provide sidewalks and pedestrian ramps and to repair or replace damaged sidewalks, in addition to right-of-way improvements identified in adopted City master plans. Encourage new developments to include pedestrian-oriented design to facilitate pedestrian path of travel.
- **Policy C 3.3: Right-of-Way Improvements.** Require new developments to construct or contribute to improvements that enhance the pedestrian experience, including human-scale lighting, streetscaping, and accessible sidewalks adjacent to the site.
- **Goal C-4:** Build and maintain a safe, connected, and equitable bicycle and micromobility network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.
  - **Policy C 4.1: Bicycle Network.** Create and maintain a bicycle-friendly environment in San Mateo and increase the number of people who choose to bicycle.
  - **Policy C 4.3: First- and Last-Mile Connections.** Encourage and facilitate provision of bicycle parking and shared mobility options at transit centers and other community destinations to provide first- and last-mile connections.
  - **Policy C 4.8: Interjurisdiction Coordination.** Continue to coordinate with adjacent jurisdictions and regional partners in the development of connected bicycle and pedestrian facilities and regional trails, as identified in adopted City plans.
- **Goal C-5:** Make transit a viable transportation option for the community by supporting frequent, reliable, cost-efficient, and connected service.
  - **Policy C 5.1: Increase Transit Ridership.** Support SamTrans and Caltrain in their efforts to increase transit ridership.
- **Goal C-6:** Achieve a transportation system that prioritizes user safety, accommodates future growth, reduces VMT per capita, and maintains efficient and safe operations for all modes and all residents.
  - **Policy C 6.2: Circulation Improvement Plan.** Maintain a transportation network that will accommodate future growth, reduce VMT per capita, and equitably implement complete streets.
- **Goal C-7:** Use parking, enforcement, and curb management strategies to effectively administer parking supply and maximize use of public assets.
  - **Policy C 7.4: Bicycle Parking.** Require the provision of bicycle parking as part of new private developments.
- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure;

limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.

- **Policy LU 1.4: Mixed-Use.** Encourage mixed-use developments to include increased residential components to provide greater proximity between jobs and housing, promote pedestrian activity, and reduce traffic congestion and vehicle miles traveled (VMT).
- **Goal LU-3:** Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.
  - **Policy LU 3.7: Visitor Economy.** Collaborate with other Peninsula cities and the San Mateo County/Silicon Valley Convention and Visitors Bureau to support the continued development of the visitor economy of both the city and the region, including lodging, entertainment, recreation, retail, and local events; encourage uses that attract visitors. Incentivize through fee reduction and visitor perks, sustainable modes of travel to and from the city to reduce both the use of air travel and gas-powered vehicles.
  - **Policy LU 3.8: Workplaces.** Develop office buildings and business parks to facilitate transit, pedestrian, and bicycle commutes. Provide compact development, mixed uses, and connectivity to transit to reduce vehicle miles traveled (VMT).

## Summary

Compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, Renewables Portfolio Standard, and CAFE standards) would increase building energy efficiency and vehicle fuel efficiency and reduce building energy demand and transportation-related fuel usage. Additionally, the proposed General Plan includes goals and policies related to land use and transportation planning and design, energy efficiency, public and active transit, and renewable energy generation that will further contribute to minimizing building, transportation-related energy, and nonrenewable sources of energy demands. As stated, buildout that could occur under the proposed project would reduce the per capita transportation energy consumption, decrease reliance on fossil fuels, and increase reliance on renewable energy sources.

Implementation of proposed policies under the proposed General Plan, in conjunction with and complementary to regulatory requirements, would ensure that energy demand associated with growth under the proposed project would decrease overall energy consumption, decrease reliance on fossil fuels, and increase reliance on renewable energy. As such, the energy consumption under the proposed project would not be considered inefficient, wasteful, or unnecessary. Therefore, energy impacts associated with implementation and operation of land uses accommodated under the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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ENE-2	The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.
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### California Renewables Portfolio Standard Program

The State's electricity grid is transitioning to renewable energy under California's RPS Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. In general, California has RPS requirements of 33 percent renewable energy by 2020 (SB X1-2), 40 percent by 2024 (SB 350), 50 percent by 2026 (SB 100), 60 percent by 2030 (SB 100), 90 percent by 2035 (SB 1020), 95 percent by 2040 (SB 1020), and 100 percent by 2045 (SB 100). SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as PG&E and PCE, whose compliance with RPS requirements would contribute to the State of California objective of transitioning to renewable energy. In addition, customers are automatically enrolled in the PCE's ECOplus program which uses approximately 50 percent renewable energy with a goal of 100 percent renewable energy by 2025.<sup>34</sup> Even if customers in the EIR Study Area were to opt out of the ECOplus program, and therefore receive all their electricity from PG&E, 33 percent of PG&E's electricity is generated from renewable energy since 2017.<sup>35</sup> By 2030, PG&E is set to meet the State's new 60 percent renewable energy mandate set forth in SB 100.

### San Mateo Climate Action Plan

As mentioned prior, the City's current CAP was developed and adopted by City Council in April 2020 as a direct update to the 2015 CAP.<sup>36</sup> The current CAP provides community-wide emissions forecasts for 2030 and 2050. The current CAP also establishes per-capita GHG emissions targets for years 2030 and 2050 based on the State's recommended per-capita targets for local efforts, which are consistent with SB 32 and EO S-03-05. It also identifies State and local measures to reduce GHG emissions and promote energy efficiency.

The proposed project, which includes a technical update to the City's CAP, builds on the existing CAP's emission reduction strategies and updates the emissions inventory and forecast to align with current legislative reduction targets established by SB 32 and AB 1279. Because the proposed project builds on the existing CAP and does not substantially alter any of the strategies therein, the proposed General Plan

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<sup>34</sup> Peninsula Clean Energy (PCE), Strategic Plan, <https://www.peninsulacleanenergy.com/strategy/>, accessed February 8, 2023.

<sup>35</sup> Pacific Gas and Electric Company (PG&E), Renewable Energy, [https://www.pgecorp.com/corp\\_responsibility/reports/2018/bu07\\_renewable\\_energy.html#:~:text=PG%26E%20delivers%20some%20of%20the,and%20various%20forms%20of%20bioenergy](https://www.pgecorp.com/corp_responsibility/reports/2018/bu07_renewable_energy.html#:~:text=PG%26E%20delivers%20some%20of%20the,and%20various%20forms%20of%20bioenergy), accessed February 8, 2023.

<sup>36</sup> City of San Mateo, April 2020, San Mateo 2020: Climate Action Plan, <https://www.cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=>, accessed November 8, 2022.

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would be consistent with the strategies in the CAP. Furthermore, as listed in impact discussion ENE-1, the proposed General Plan includes policies that would contribute toward minimizing inefficient, wasteful, or unnecessary transportation energy consumption, and ensure compliance with State, regional, or local plans for renewable energy.

The land uses accommodated under the proposed General Plan would be required to comply with the current and future iterations of the Building Energy Efficiency Standards and CALGreen. Furthermore, as described for impact discussion ENE-1, the proposed General Plan includes Land Use (LU) and Circulation (C) goals and policies, which would support the statewide goal of transitioning the electricity grid to renewable sources. Therefore, implementation of the proposed General Plan would not conflict with or obstruct implementation of California's RPS program, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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ENE-3	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to energy.
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Cumulative impacts would occur if a series of actions lead to a wasteful, inefficient, or unnecessary consumption of energy resources or a conflict with or obstruction of a State or local plan for renewable energy and energy efficiency.

All the development projects within the vicinity of the project's EIR Study Area are within the service area of PCE and PG&E. These projects would result in a long-term increase in operational energy demand for electricity and natural gas use associated with population growth. In addition, construction activities would require the use of energy for purposes such as the operation of construction equipment and tools, and construction of development projects may overlap. However, all projects developed within the PCE and PG&E service area would implement the requirements of the Building and Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6) and the California Green Building Code (California Code of Regulations, Title 24, Part 11). Furthermore, new buildings would use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations.

Future development would also increase annual VMT, and thus fuel consumption. However, vehicles would be subject to the USEPA CAFE standards for vehicular fuel efficiency, and average corporate fuel economy continues to increase as a result of State and federal laws, including the Pavley Advanced Clean Cars program. Vehicle turnover also improves the overall fuel economy of California's vehicle fleets. The proposed General Plan also includes policies to reduce energy use and measures to align with the state's goals for carbon neutrality. Cumulative impacts would therefore be *less than significant*.

**Significance without Mitigation:** Less than significant.



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## 4.6 GEOLOGY AND SOILS

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential geology and soils impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.6.1 ENVIRONMENTAL SETTING

#### 4.6.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

The federal Paleontological Resources Preservation Act of 2002 limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency. Additionally, it specifies these researchers must agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers. This act incorporates key findings of a report, *Fossils on Federal Land and Indian Lands*, issued by the Secretary of the Interior in 2000, that establishes that most vertebrate fossils and some invertebrate and plant fossils are considered rare resources.<sup>1</sup>

##### State Regulations

###### *Alquist-Priolo Earthquake Fault Zoning Act*

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface fault rupture to structures used for human occupancy.<sup>2</sup> The main purpose of the act is to prevent the construction of buildings used for human occupancy on top of active faults. This act only addresses the hazard of surface fault rupture—not other earthquake hazards such as earthquake-induced liquefaction or landslides. The act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around surface traces of active faults and to issue appropriate maps. The maps, which are developed using existing United States Geological Survey's (USGS) 7.5-minute quadrangle map bases, are then distributed to all affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. Generally, construction within 50 feet of an active fault zone is prohibited.

<sup>1</sup> U.S. Department of the Interior, May 2000, *Fossils on Federal & Indian Lands, Report of the Secretary of the Interior*, [https://www.blm.gov/sites/blm.gov/files/programs\\_paleontology\\_quick%20links\\_Assessment%20of%20Fossil%20Management%20on%20Federal%20%26%20Indian%20Lands%2C%20May%202000.pdf](https://www.blm.gov/sites/blm.gov/files/programs_paleontology_quick%20links_Assessment%20of%20Fossil%20Management%20on%20Federal%20%26%20Indian%20Lands%2C%20May%202000.pdf), accessed September 30, 2022.

<sup>2</sup> California Department of Conservation, 2019, Alquist-Priolo Earthquake Fault Zoning Act, <https://www.conservation.ca.gov/cgs/alquist-priolo>, accessed September 30, 2022.

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### *Seismic Hazards Mapping Act*

The Seismic Hazards Mapping Act, which was passed in 1990, addresses seismic hazards such as liquefaction and seismically induced landslides.<sup>3</sup> Under this act, seismic hazard zones are mapped by the State Geologist to assist local governments in land use planning. Section 2691(c) of this act states that “it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.” Section 2697(a) of the act states that “cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

### *California Building Code*

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations (CCR), commonly referred to as the “California Building Code” (CBC). The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The City of San Mateo regularly adopts each new CBC update under the San Mateo Municipal Code (SMMC) Chapter 23.08, *Building Code*. These codes provide minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. They also regulate grading activities, including drainage and erosion control.

### *California Environmental Quality Act*

Paleontological resources are afforded protection under the California Environmental Quality Act (CEQA). The Society of Vertebrate Paleontology has set significance criteria for paleontological resources.<sup>4</sup> Most practicing professional vertebrate paleontologists adhere closely to the Society of Vertebrate Paleontology’s assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most State regulatory agencies with paleontological laws, ordinances, regulations, and standards accept and use the professional standards set forth by the Society of Vertebrate Paleontology.

### *California Public Resources Code Section 5097*

California Public Resources Code (PRC) Section 5097.5 prohibits the destruction or removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency.

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<sup>3</sup> California Department of Conservation, 2019, Seismic Hazards Mapping Act, <https://www.conservation.ca.gov/cgs/hazards/seismic-hazards-mapping-act>, accessed September 30, 2022.

<sup>4</sup> Society of Vertebrate Paleontology, 2010, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*, [https://vertpaleo.org/wp-content/uploads/2021/01/SVP\\_Impact\\_Mitigation\\_Guidelines.pdf](https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf), accessed September 30, 2022.

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### *California Penal Code Section 622.5*

The California Penal Code Section 622.5 details the penalties for damage or removal of paleontological resources, whether from private or public lands.

## Regional Regulations

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan* (MJHMP), updated in 2021 in accordance with the federal Disaster Mitigation Action of 2000 (DMA 2000), provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term risk to people and property from these hazards. The San Mateo Jurisdictional Annex of the MJHMP provides an assessment of hazards and vulnerabilities, and a set of mitigation actions for San Mateo specifically while considering the results from the countywide effort. In the context of an MJHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including seismic hazards and erosion. Mitigation actions related to seismic hazards in the San Mateo Jurisdictional Annex of the MJHMP include adopting the most recent California Building Standards Code, retrofitting or relocating existing structures in high hazard areas, and adopting best practices for evacuation planning.

The MJHMP must be reviewed and approved by the Federal Emergency Management Agency (FEMA) every five years to maintain eligibility for disaster relief funding. As part of this process, the California Governor's Office of Emergency Services reviews all local hazard mitigation plans in accordance with DMA 2000 regulations and coordinates with local jurisdictions to ensure compliance with FEMA's Local Mitigation Plan Review Guide. As part of the proposed project, the MJHMP is adopted in its entirety into the proposed Safety Element by reference.

## Local Regulations

### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to geology and soils are primarily in the Safety Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.6.3, *Impact Discussion*.

### *City of San Mateo Municipal Code*

The SMMC includes various directives pertaining to geology and soils. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to geology and soil impacts are included in Title 7, *Health, Sanitation, and Public Nuisances*, Title 23, *Building and Construction*, and Title 26, *Subdivisions*.

- Chapter 7.38, *Sanitary Sewer Use*, requires that all new construction connects to the City's sanitary sewer system and includes requirements to prevent unauthorized releases into the system.

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- Chapter 23.08, *Building Code*, adopts the 2022 CBC as the rules, regulations, and standards within the City as to all matters except as modified or amended in the SMMC. The CBC includes requirements for geotechnical reports at the discretion of the building official.
- Chapter 23.40, *Site Development Code*, is adopted to specifically to protect public and private lands from erosion, earth movement, and flooding, and establishes minimum standards and requirements relating to land grading, excavations and fills, and removal of major vegetation, including the preparation of geotechnical reports. The Site Development Code also regulates development on or near steep slopes in order to minimize the risk of personal injury, damage to property, and impact on water quality from potential landslides, erosion, earth creep, stormwater runoff, and other hazards associated with hillside areas of the City, as well as preserves existing topographical forms, open spaces, habitat areas and visual resources from encroachment by new hillside development. Site development planning applications may require an erosion and sediment control plan and control measures.
- Chapter 26.04, *General Provisions*, establishes the San Mateo City Subdivision Code to protect the community to the maximum extent from excessive stormwater runoff, wanton destruction of trees, increased soil erosion, earth movement, earthquake hazards, and other geological hazards. Applicants who are proposing subdivisions within the EIR Study Area must submit geotechnical reports before getting City approval on the final map. Problems of drainage are to be resolved in such manner as to provide substantial security against excessive runoff or flooding, earth movements and excessive erosion.

### 4.6.1.2 EXISTING CONDITIONS

#### Geology

The EIR Study Area is in the USGS's San Mateo Quadrangle 7.5-minute topographic map area.<sup>5</sup> The area is typified by northwest-southwest-trending mountain ridges and intervening valleys.<sup>6</sup> Elevations range from sea level to approximately 676 feet at Black Mountain. Regional mapping completed by the USGS indicates that there are 16 geologic units in the EIR Study Area.<sup>7</sup> These units are broadly categorized by the USGS into four main units as Unconsolidated, undifferentiated, Sedimentary, clastic, Metamorphic, serpentinite, and Melange. Figure 4.6-1, *Geology Map*, shows the location of each geologic category in the EIR Study Area.

- **Unconsolidated, undifferentiated:** This unit includes alluvium, colluvium and artificial fill. Alluvium consists of sediment that has been transported and deposited by streams. Alluvium is vulnerable to seismically induced instability. Colluvium contains deposits of unconsolidated solid material and weathered rock fragments that gather at the base of slopes by gravitational or slope wash processes. Colluvium may be susceptible to flow failures.

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<sup>5</sup> United States Geological Survey, 1980, San Mateo Quadrangle California 7.5-Minute Topographic Map, scale 1:24,000.

<sup>6</sup> Tetra Tech, 2021, Multijurisdictional Local Hazard Mitigation Plan, Volume 1, Planning-Area-Wide Elements.

<sup>7</sup> Pampeyan, E. H., 1981, Geologic Map, Geology and Former Shoreline Features of the San Mateo 7.5-Minute Quadrangle, San Mateo County, California, United States Geological Survey Open-File Report 81-839, scale 1:24,000.



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- **Sedimentary, clastic:** This unit includes greywacke sandstone with interbedded siltstone, shale, pebble conglomerate along with other units within the Franciscan Assemblage. This unit is primarily found within the lower portion of the foothills of the EIR Study Area.
- **Mélange:** The bedrock in the EIR Study Area consists of sheared rock (mélange), which is a weak matrix of sheared and altered shale and sandstone that contains serpentine, greenstone, chert, limestone, and schist. Sheared rock (mélange) is susceptible to landslides, whereas Franciscan sandstone and shale are more stable. This geologic unit is found primarily in the hillsides of the EIR Study Area.
- **Serpentinite:** Serpentinite is a metamorphic rock which forms at tectonic plate boundaries. Serpentinite is often formed in Franciscan Complexes when ocean water is heated and moved through upper mantle and ocean crust rocks, which hydrates the magnesium and iron-rich materials in the rocks.

Unique geologic features are those that are unique to the field of geology. Each rock unit tells a story of the natural processes operating at the time it was formed. The rocks and geologic formations exposed at the earth's surface or revealed by drilling and excavation are our only record of that geologic history. What makes a geologic unit or feature unique can vary considerably. For example, a geologic feature may be considered unique if it is the best example of its kind and has distinctive characteristics of a geologic principle that is exclusive locally or regionally, is a key piece of geologic information important to geologic history, contains a mineral that is not known to occur elsewhere in the area, or is used as a teaching tool. Unique geological features are not common in San Mateo or the EIR Study Area. The geologic processes are generally the same as those in other parts of the state, country, and even the world. The geology and soils in the EIR Study Area are common throughout the city and region and are not considered to be unique.

### Soils

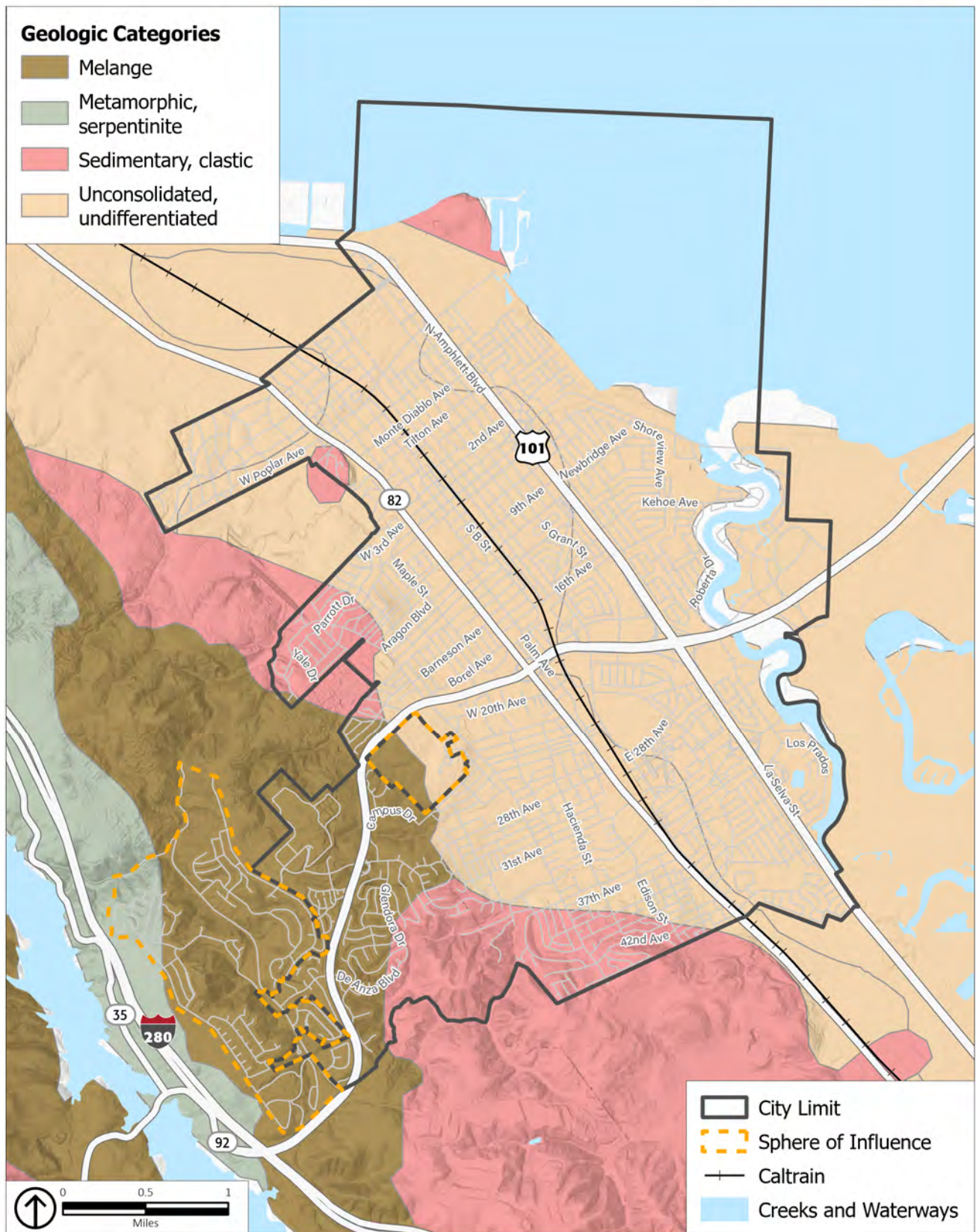
The soils in the EIR Study Area have been mapped by the United States Department of Agriculture (USDA) Natural Resource Conservation Services. In general, the soils beneath the EIR Study Area are dominated by well-drained, shallow to moderately deep, fine-loamy soils such as loam and clay loam in the uplands, with additional areas of poorly drained clay and silty soils in the tidal flats and salt marshes.<sup>8</sup> According to the USDA, the most prevalent soil types are the Fagan loam, Los Gatos loam, Maymen gravelly loam, Novato clay, Obispo clay, urban land, and Typic Argiustolls, as shown on Figure 4.6-2, *Soils Map*.

The properties of these soils are variable, ranging from fine-loamy soils of the Fagan series, Los Gatos series and Maymen series, to completely urbanized in the urban land classification. According to published soil data, several soil types, notably the Maymen-Los Gatos, are characterized by steep slopes and erosion hazards, where landslides and flows are possible.<sup>9</sup>

<sup>8</sup> USDA Soil Conservation Service, 1991, Soil Survey of San Mateo County, eastern part, and San Francisco County, California.

<sup>9</sup> USDA Soil Conservation Service, 1991, Soil Survey of San Mateo County, eastern part, and San Francisco County, California.

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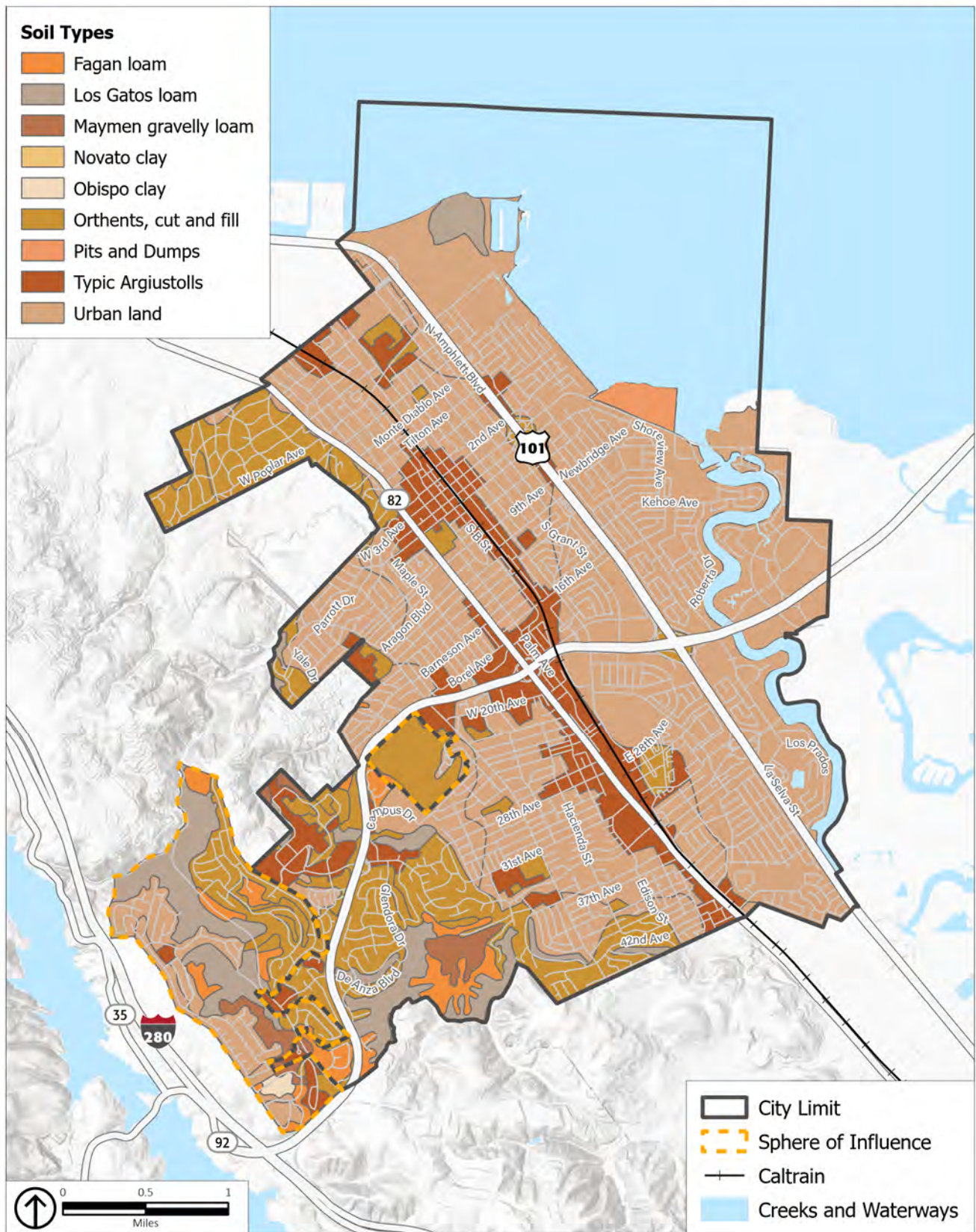


Source: USGS, 2023; PlaceWorks, 2023.

Figure 4.6-1  
Geology Map  
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Source: USDA, 2023; PlaceWorks, 2023.

Figure 4.6-2  
Soils Map

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### Regional Seismicity

The Earth's crust includes tectonic plates that collide or slide past one another along plate boundaries. California is particularly susceptible to such plate movements, notably the largely horizontal or "strike-slip" movement of the Pacific Plate as it impinges on the North American Plate. In general, earthquakes occur when the accumulated stress along a plate boundary or fault is suddenly released. This slippage can vary widely in magnitude, from a few millimeters or centimeters to tens of feet.

The performance of human-made structures during a major seismic event varies widely due to a number of factors, including location with respect to active fault traces or areas prone to liquefaction or seismically induced landslides; the type of building construction (e.g., wood frame, unreinforced masonry, nonductile concrete frame); and the proximity, magnitude, depth, and intensity of the seismic event itself. In general, evidence from past earthquakes shows that wood-frame structures tend to perform well, especially when their foundations are properly designed and anchored. Conversely, older, unreinforced masonry structures and nonductile reinforced concrete buildings (especially those built in the 1960s and early 1970s) do not perform well, especially if they have not undergone appropriate seismic retrofitting. Applicable building code regulations, such as those in the CBC, include seismic requirements that are designed to ensure the satisfactory performance of building materials under prescribed seismic conditions.

The EIR Study Area, like much of the San Francisco Bay Area, is vulnerable to seismic activity due to the presence of active faults in the region. The most prominent active fault near the EIR Study Area is the San Andreas Fault approximately about a half mile to the southwest at its nearest point, as shown on Figure 4.6-3, *Faults Map*. There are no known active faults in the EIR Study Area, so surface fault rupture is not considered a significant hazard.

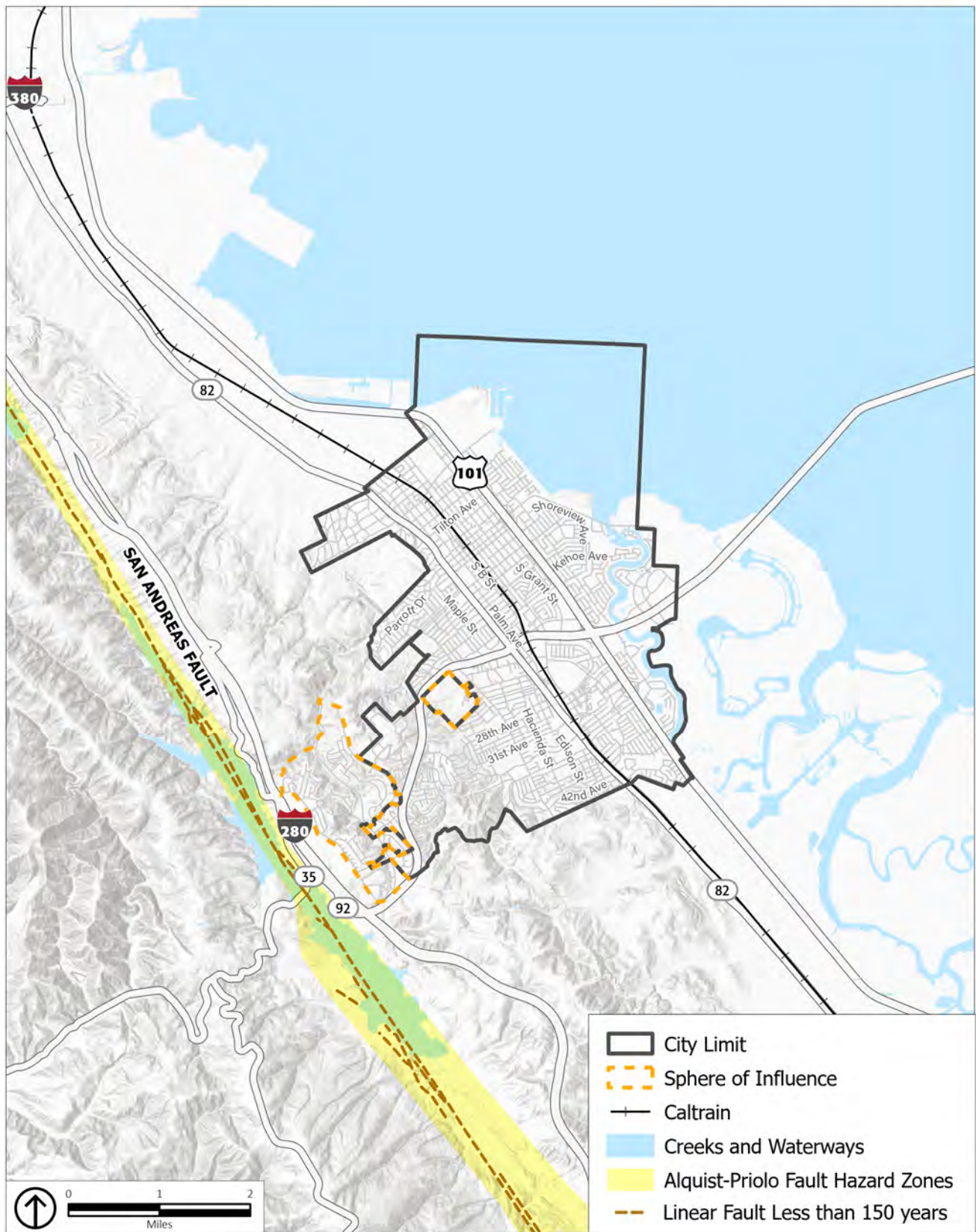
The severity of ground shaking depends on several variables, such as earthquake magnitude and origin; local geology, including the properties of unconsolidated sediments; groundwater conditions; and topographic setting. In general, ground shaking hazards are most pronounced in areas that are underlain by loosely consolidated soil/sediment.<sup>10</sup>

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<sup>10</sup> Southern California Earthquake Center, 2011, *Putting Down Roots in Earthquake Country*, Lucile M. Jones, United States Geological Survey, and Mark Benthien, SCEC.



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Source: USGS, 2019; DOC, 2023; PlaceWorks, 2023.

Figure 4.6-3  
Faults Map



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When earthquake faults within the San Francisco Bay Area's nine-county area were considered, the USGS estimated that the probability of a magnitude (M) 6.7 or greater earthquake prior to year 2044 is 72 percent, or nearly a three-quarters probability. The forecast probability for each individual fault to produce an M 6.7 or greater seismic event by the year 2044 is 32 percent for the Hayward Fault, 33 percent for the San Andreas Fault, and 25 percent for the Calaveras Fault.<sup>11</sup> Earthquakes of this magnitude can create ground accelerations severe enough to cause major damage to structures and foundations not designed to resist earthquakes. Underground utility lines are also susceptible where they lack sufficient flexibility to accommodate the seismic ground motion.<sup>12</sup> In the event of an M 7.8 earthquake on the San Andreas Fault, the seismic forecasts on the Association of Bay Area Governments' interactive GIS website (developed by a cooperative working group that included the USGS and the CGS) suggest that most parts of the EIR Study Area are expected to experience "violent" shaking.<sup>13</sup> The April 1906 earthquake on the San Andreas Fault, estimated between M 7.7 and M 8.3, was the largest seismic event in recent history that affected the EIR Study Area. More recently, the M 6.9 Loma Prieta earthquake of October 1989 on the San Andreas Fault caused significant damage throughout the San Francisco Bay Area, although no deaths were reported in San Mateo County.

### Liquefaction

Liquefaction typically occurs in areas where moist, fine-grained, cohesionless sediment or fill materials are subjected to strong, seismically induced ground shaking. Under certain circumstances, the ground shaking can temporarily transform an otherwise solid material to a fluid state, which can result in the horizontal movement of soils on gentle slopes, called lateral spreading. Liquefaction is a serious hazard and may result in buildings that subside and suffer major structural damage. Liquefaction is most often triggered by seismic shaking, but it can also be caused by improper grading, landslides, or other factors. In dry soils, seismic shaking may cause soil to consolidate rather than flow, a process known as densification. Liquefaction in the EIR Study Area ranges from very low in the hillsides of the city to very high in the marshland and tidal marshes on the eastern side of the EIR Study Area, as shown on Figure 4.6-4, *Seismic Hazard Zones*.

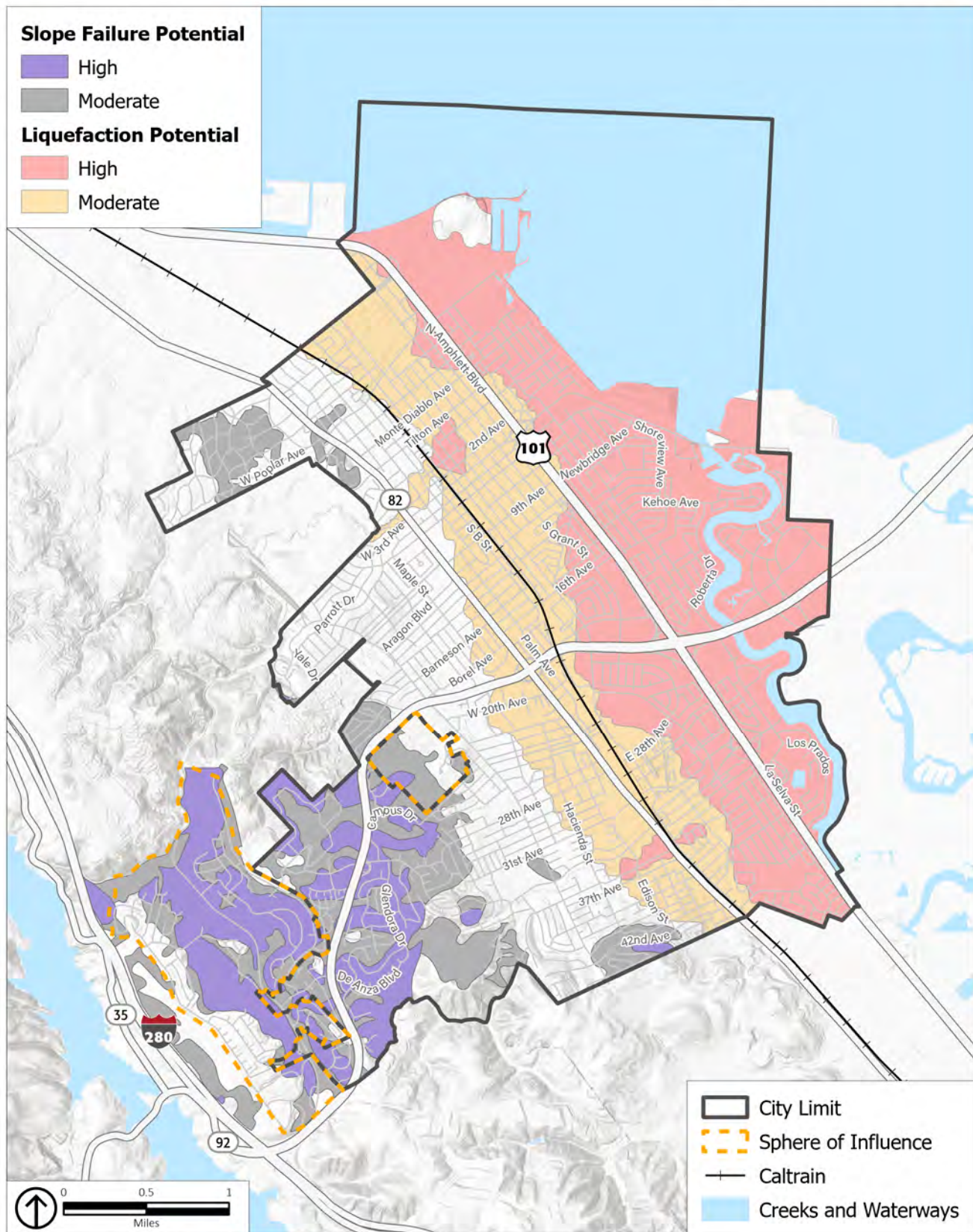
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<sup>11</sup> United States Geological Survey, 2015, Uniform California Earthquake Rupture Forecast 3: A New Earthquake Forecast for California's Complex Fault System, Fact Sheet 2015-3009.

<sup>12</sup> Association of Bay Area Governments, 1995, *The San Francisco Bay Area On Shaky Ground*, Publication Number P95001EQK, 13 maps, scale 1:1,000,000.

<sup>13</sup> Association of Bay Area Governments, 2023, MTC/ABAG Hazard Viewer Map, Earthquake Shaking Scenarios, <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed May 26, 2023.

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Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 4.6-4  
Seismic Hazard Zones

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The northeastern portion of the EIR Study Area located along the San Francisco Bay is predominantly unconsolidated soils, which consist of soft, unconsolidated, water-saturated, silty clay with shell fragments.<sup>14</sup> These low-lying areas that front the Bay are particularly susceptible to liquefaction.<sup>15</sup> In the western portions of the EIR Study Area, the soils consist of colluvium and bedrock, which have a low susceptibility to liquefaction. As shown on Figure 4.6-4, the majority of the liquefaction susceptibility areas in the EIR Study Area are in urbanized, low-lying areas near creeks or the waterfront. Many of the open space areas and hillside neighborhoods are in low or very low liquefaction susceptibility areas.

### Landslides

Landslides are gravity-driven movements of earth materials that can include rock, soil, unconsolidated sediment, or combinations of such materials. The rate of landslide movement can vary considerably; some move rapidly, as in a soil or rock avalanche, and others “creep,” or move slowly for long periods of time. The susceptibility of a given area to landslides depends on many variables, although the general characteristics that influence landslide hazards are widely acknowledged. Some of the more important contributing factors are:

- **Slope Material.** Loose, unconsolidated soils and soft, weak rocks are more hazardous than firm, consolidated soils or hard bedrock.
- **Slope Steepness.** Most landslides occur on moderate to steep slopes.
- **Structure and Physical Properties of Materials.** This includes the orientation of layering and zones of weakness relative to slope direction.
- **Water Content.** Increased water content increases landslide hazard by decreasing friction and adding weight to the materials on a slope.
- **Vegetation Coverage.** Abundant vegetation with deep roots promotes slope stability.
- **Proximity to Areas of Erosion or Man-Made Cuts.** Undercutting slopes can greatly increase landslide potential.
- **Earthquake Ground Motions.** Strong seismic ground motion can trigger landslides in marginally stable slopes or loosen slope materials, which increases the risk of future landslides.

As shown in Figure 4.6-4, landslides have the potential to occur in the EIR Study Area, most notably on the steeper slopes that lie on the western edge of the EIR Study Area. In these areas, landslides are commonly associated with slopes underlain with Franciscan sheared rock (mélange) and pre-existing landslide deposits, which indicate unstable underlying materials.<sup>16</sup>

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<sup>14</sup> Pampeyan, E. H., 1981, Geologic Map, Geology and Former Shoreline Features of the San Mateo 7.5-Minute Quadrangle, San Mateo County, California, United States Geological Survey Open-File Report 81-839, scale 1:24,000.

<sup>15</sup> Association of Bay Area Governments, 2023, MTC/ABAG Hazard Viewer Map, Earthquake Liquefaction Susceptibility, <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed May 26, 2023.

<sup>16</sup> Association of Bay Area Governments, 2023, MTC/ABAG Hazard Viewer Map, Landslide Hazard (Rainfall Induced), <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed May 26, 2023.

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Sheared rock (mélange) is the most unstable of the many rock types within the Franciscan Formation, whereas sandstone and conglomerate units tend to be more stable with a lower landslide risk. Many of the upland areas in the EIR Study Area are characterized by steep slopes and soils that overlie Franciscan bedrock. Landslides are not an issue in parts of the EIR Study Area where the topography is flat. Due to the differences in the physical characteristics of slope materials, which markedly influence landslide potential, some superficially similar areas may differ widely in terms of landslide hazards. For this reason, site-specific geotechnical investigations are essential to the accurate assessment of potential landslide hazards at any given site.

### Erosion

Erosion occurs when the upper layers of soil are displaced by erosive agents such as water, ice, snow, air, plants, animals, or anthropogenic forces. Sandy soils on moderate slopes or clayey soils on steep slopes are susceptible to erosion when exposed to these forces.<sup>17</sup> Erosion can become more frequent when established vegetation is disturbed or removed due to grading, wildfires, or other factors. Within the valley areas of the EIR Study Area, water flow in streams and rivers can erode the banks of waterways, causing the stream or river to meander. Erosion can cause the soil underneath buildings and structures to become compromised or fail, which is typically limited to localized areas.

### Land Subsidence

Land subsidence refers to the lowering of the ground surface due to extraction or lowering of water levels or other stored fluids within the subsurface soil pores, or due to seismic activity that can cause alluvial sediments to compact.

Known current and historical instances of land subsidence in California have been recorded by the USGS. The EIR Study Area is not included in the USGS' areas of known land subsidence.<sup>18</sup> In addition, the project site is not in an area served by water districts that rely on local groundwater for their municipal supply.<sup>19</sup> Based on the lack of large-scale groundwater extraction within the EIR Study Area, land subsidence is unlikely to be a significant hazard.<sup>20</sup>

### Expansive Soils

Expansive soils can change dramatically in volume depending on moisture content. When wet, these soils can expand; when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomena can include seasonal rainfall, landscape irrigation, utility leakage, and/or perched

<sup>17</sup>USDA Soil Conservation Service, 1991, Soil Survey of San Mateo County, eastern part, and San Francisco County, California.

<sup>18</sup> United States Geological Survey, 2023, Areas of Land Subsidence in California, [https://ca.water.usgs.gov/land\\_subsidence/california-subsidence-areas.html](https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html), accessed May 26, 2023.

<sup>19</sup> California Water Service, 2021, *2020 Urban Water Management Plan: Mid-Peninsula District*, [https://www.calwater.com/docs/uwmp2020/MPS\\_2020\\_UWMP\\_FINAL.pdf](https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf), accessed April 6, 2023.

<sup>20</sup> California Department of Water Resources, 2023, SGMA Data Viewer, <https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels>, accessed May 31, 2023.

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groundwater. Expansive soil can exhibit wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils.

Expansive soils are typically very fine grained with a high to very high percentage of clay, typically montmorillonite, smectite, or bentonite clay. Linear extensibility soil tests are often used to identify expansive soils, wherein soil sample volume/length changes in response to reduced moisture content.<sup>21</sup> A linear extensibility of 3 percent or greater connotes moderate to high shrink-swell potential. This soil behavior has the potential to cause damage to buildings, roads, and other structures.

Expansive soils are not common in the EIR Study Area; however, they can exist in localized areas such as the Bay Mud geologic units that underlie parts of eastern San Mateo.<sup>2223</sup> The USDA Web Soil Survey (a nationwide data repository) for the EIR Study Area demonstrates low ratings of linear extensibility and plasticity for the majority of the soils in the EIR Study Area, with moderate (i.e. Fagan loam) or high (i.e. Novato clay) ratings dispersed throughout the hillside areas of the EIR Study Area.<sup>24</sup> Expansive soils are typically identified during project review stages prior to construction, and require specific engineering methods to reduce stresses to buildings and infrastructure. A geotechnical investigation generally provides the most reliable means of evaluating and mitigating such soil characteristics.

## Paleontological Resources

Paleontological resources (fossils) are the remains and/or traces of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and wood are found in the geologic deposits (rock formations) in which they were originally buried. Paleontological resources represent a limited, non-renewable, sensitive scientific and educational resource. The potential for fossil remains at a location can be predicted through previous correlations established between the fossil occurrence and the geologic formations where they were buried. For this reason, geologic knowledge of a particular area and the paleontological resource sensitivity of particular rock formations make it possible to predict where fossils will or will not be encountered.

A search of the University of California Museum of Paleontology Specimen Search database indicated there are 1,697 recorded paleontological specimens within the County of San Mateo, most of which were found in the Woodside Area or at beach locations such as Moss Beach and San Gregorio Beach.<sup>25</sup>

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<sup>21</sup> Army Corps of Engineers Field Manual TM 5-818-7, 1985, [https://armypubs.army.mil/epubs/DR\\_pubs/DR\\_a/pdf/web/tm5\\_818\\_7.pdf](https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/tm5_818_7.pdf), accessed May 26, 2023.

<sup>22</sup> Pampeyan, E. H., 1981, Geologic Map, Geology and Former Shoreline Features of the San Mateo 7.5-Minute Quadrangle, San Mateo County, California, United States Geological Survey Open-File Report 81-839, scale 1:24,000.

<sup>23</sup> USDA, 2023, Web Soil Survey, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>, accessed May 26, 2023.

<sup>24</sup> USDA, 2023, Web Soil Survey, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>, accessed May 26, 2023.

<sup>25</sup> University of California Museum of Paleontology, Specimen Search, [https://ucmpdb.berkeley.edu/cgi/ucmp\\_query2](https://ucmpdb.berkeley.edu/cgi/ucmp_query2), accessed May 26, 2023.



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### 4.6.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant geology and soils impact if it would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) 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; ii) strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; iv) landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
4. 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.
5. 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.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
7. In combination with past, present, and reasonably foreseeable projects, result in cumulative geology and soils impacts in the area.

### 4.6.3 IMPACT DISCUSSION

<b>GEO-1</b>	The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) 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; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides.
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#### Earthquake Fault Rupture

As discussed in Section 4.6.1.2, *Existing Conditions*, there are no known active faults in the EIR Study Area, and the nearest fault is the San Andreas Fault, approximately a half mile to the west. The EIR Study Area is not in an Alquist-Priolo Fault Zone.<sup>26</sup>

<sup>26</sup> California Geological Survey, Alquist-Priolo Earthquake Fault Zoning Act, <https://www.conservation.ca.gov/cgs/alquist-priolo>, accessed on May 26, 2023.

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The Safety (S) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider seismic impacts. The following General Plan goal and policy serve to minimize potential adverse impacts from ground failure:

- **Goal S-1:** Minimize potential damage to life, environment, and property through timely, well-prepared, and well-coordinated emergency preparedness, response plans, and programs.
  - **Policy S 1.3: Location of Critical Facilities.** Avoid locating critical facilities, such as hospitals, schools, fire, police, emergency service facilities, and other utility infrastructure, in areas subject to slope failure, wildland fire, flooding, sea level rise, and other hazards, to the extent feasible.
  - **Policy S 1.6: Emergency Infrastructure and Equipment.** Maintain and fund the City's emergency operations center in a full functional state of readiness. Designate a back-up Emergency Operations Center with communications redundancies.
- **Goal S-2:** Take steps to protect the community from unreasonable risk to life and property caused by seismic and geologic hazards.
  - **Policy S 2.1: Geologic Hazards.** Require site-specific geotechnical and engineering studies, subject to the review and approval of the delegated City Engineer and Building Official, for development proposed on sites identified in Figure S-4 [of the proposed General Plan] as having moderate or high potential for ground failure. Permit development in areas of potential geologic hazards only where it can be demonstrated that the project will not be endangered by, nor contribute to, the hazardous condition on the site or on adjacent properties.

Furthermore, SMMC Chapter 23.08, Chapter 23.40, and Chapter 26.04 require geotechnical investigations to protect the community from earth movement, earthquake hazards, and other geological hazards.

Based on the lack of known active faults in the EIR Study Area, compliance with SMMC regulations and proposed General Plan goals and policies identified above would ensure implementation of proposed project would not directly or indirectly cause the risk of loss, injury, or death involving rupture of a known earthquake fault. Therefore, the impact would be *less than significant*.

### Seismic Ground Shaking

The intensity of ground shaking at a given location depends on several factors, primarily on the earthquake magnitude, the distance from the epicenter, and the characteristics of the soils or bedrock units underlying the site. The San Gregorio, Hayward and San Andreas Faults, which are closest to the EIR Study Area, are potentially capable of producing the most intense ground accelerations in the EIR Study Area due to their proximity. Secondary effects of earthquakes are nontectonic processes such as liquefaction, lateral spreading, seismically induced landslides, and ground lurching, which can lead to ground deformation. Ground deformation, including fissures, settlement, displacement, and loss of bearing strength, are the leading causes of damage to structures during a moderate to large earthquake.

The proposed Safety (S) Element contains goals, policies, and actions that require local planning and development decisions to consider impacts that contribute to the risk of loss, injury, or death as a result of earthquakes. In addition to proposed General Plan goals and policies listed above, the following

## GEOLOGY AND SOILS

General Plan 2040 goal, policy, and actions would serve to minimize potential adverse impacts from seismic hazards:

- **Goal S-2:** Take steps to protect the community from unreasonable risk to life and property caused by seismic and geologic hazards.
  - **Policy S 2.3: Vulnerable Buildings.** Encourage modifications to existing unreinforced masonry and soft story buildings, and similar unsafe building conditions to reduce the associated life safety hazards from ground shaking during earthquakes, as shown on Figure S-3 [of the proposed General Plan]. Require voluntary structural modifications to be designed in character with the existing architectural style.
  - **Action S 2.5: Seismic Shaking Mapping.** Consult with a geology specialist to update the City's geologic hazard mapping, documenting the areas within the city with moderate or high potential for liquefaction or ground failure, as shown in Figure S-4. [of the proposed General Plan].
  - **Action S 2.6: Incentive for Seismic Upgrades.** Develop and implement a program to provide financial incentives and education to building owners to support seismic upgrades.
  - **Action S 2.7: Seismic Stability.** Review the seismic stability of the City's assets and infrastructure, such as City Hall, recreational facilities, roadways, and bridges and identify improvements necessary to enhance each facility's ability to withstand geologic hazards, up to and including a full replacement of the facility.

In northern California, there is no method to completely avoid earthquake hazards. However, appropriate measures to minimize the effects of earthquakes are included in the CBC, with specific provisions for seismic design. The design of structures in accordance with the CBC would minimize the effects of ground shaking to the greatest degree feasible, except for during a catastrophic seismic event. Additionally, development projects under the proposed project would be required to comply with SMMC requirements for geotechnical reports on a project-by-project basis. Because future development under the proposed project would be required to comply with both the CBC and the SMMC, as well as proposed General Plan goals and policies discussed above, implementation of the proposed project would not cause or worsen seismic ground shaking; therefore, the impact would be *less than significant*.

### Liquefaction

The EIR Study Area contains a range of geological and soil profiles. Within the EIR Study Area, liquefaction susceptibility ranges from low in steeply sloped areas to moderate and very high in the marshland and tidal marshes on the eastern side of the EIR Study Area, as shown on Figure 4.6-4. As discussed in Chapter 3, *Project Description*, of this Draft EIR, future development under the proposed project is expected to occur in existing urban areas and would be largely concentrated on a limited number of vacant parcels and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing residential and residential-serving development. These urban areas are generally located in portions of the EIR Study Area that have low liquefaction susceptibility. However, some existing urban areas in the EIR Study Area are built atop soil materials which have a high liquefaction susceptibility.

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The proposed Safety (S) Element contains goals, policies, and actions that require local planning and development decisions to consider impacts that contribute to the risk of loss, injury, or death as a result of earthquakes. In addition to proposed General Plan goals, policies, and actions listed above, the following General Plan 2040 goal, policy, and actions would serve to minimize potential adverse impacts from liquefaction:

- **Goal S-2:** Take steps to protect the community from unreasonable risk to life and property caused by seismic and geologic hazards.
  - **Policy S 2.4: Liquefaction.** Use the best-available liquefaction mapping data to avoid siting and locating new public facilities and infrastructure in areas susceptible to liquefaction, as shown in Figure S-4 [of the proposed General Plan].

In the event that future development is proposed on areas with potential liquefaction susceptibility, the development would be required to comply with existing regulations in the CBC and undergo a geotechnical review in accordance with SMMC regulations. Compliance with CBC, SMMC, and proposed General Plan goals, policies, and actions would minimize the risk of loss, injury, or death involving liquefaction after a seismic-related ground failure, and impacts would be *less than significant*.

### Landslides

Portions of the EIR Study Area susceptible to landslides are on the steep slopes to the west and in hilly areas. As described above, future development under the proposed project is expected to be concentrated in existing urban areas.

The proposed Safety (S) Element contains goals, policies, and actions that require local planning and development decisions to consider impacts that contribute to the risk of loss, injury, or death as a result of earthquakes. In addition to proposed General Plan goals, policies, and actions listed above, the following General Plan 2040 goal and policy would serve to minimize potential adverse impacts from landslide:

- **Goal S-2:** Take steps to protect the community from unreasonable risk to life and property caused by seismic and geologic hazards.
  - **Policy S 2.2: Landslides and Erosion Control.** Reduce landslides and erosion in existing and new development through continuing education of design professionals on mitigation strategies. Control measures shall retain natural topographic and physical features of the site, if feasible.

Furthermore, new development or redevelopment in any of the portions of the EIR Study Area deemed to be within landslide-susceptible areas would be required to comply with grading, erosion, and sediment control regulations in the CBC and the provisions in the SMMC for geotechnical investigations. Compliance with CBC and SMMC, as well as the proposed General Plan goals, policies, and actions discussed above, would minimize the risk of loss, injury, or death involving landslide after a seismic-related ground failure and ensure that impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## GEOLOGY AND SOILS

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### **GEO-2                      The proposed project would not result in substantial soil erosion or the loss of topsoil.**

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Substantial soil erosion or the loss of topsoil during construction of future development under the proposed project could undermine structures or minor slopes, which would be a concern during implementation of the proposed project.

As discussed in Chapter 3, *Project Description*, of this Draft EIR, future development under the proposed project is expected to occur in urban areas and would be concentrated on a limited number of vacant parcels and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing residential and residential-serving development. The CBC provides regulations for construction to provide proper grading, drainage, and erosion and sediment control. In addition, SMMC Chapter 23.40 is adopted to specifically to protect public and private lands from erosion, earth movement, and flooding, and establishes minimum standards and requirements relating to land grading, excavations and fills, and removal of major vegetation. The Site Development Code also regulates development on or near steep slopes in order to minimize the risk of personal injury, damage to property, and impact on water quality from potential landslides, erosion, earth creep, stormwater runoff, and other hazards associated with hillside areas of the EIR Study Area, as well as preserves existing topographical forms, open spaces, habitat areas and visual resources from encroachment by new hillside development. Site development planning applications may require an erosion and sediment control plan and control measures. SMMC Chapter 26.04 establishes the San Mateo City Subdivision Code to protect the community to the maximum extent from excessive stormwater runoff, wanton destruction of trees, increased soil erosion, earth movement, earthquake hazards, and other geological hazards. Problems of drainage are to be resolved in such manner as to provide substantial security against excessive runoff or flooding, earth movements and excessive erosion.

Furthermore, because future development is anticipated to occur as infill or redevelopment in urban areas, development is not likely to result in substantial soil erosion or loss of topsoil. Adherence to existing regulatory requirements that include, but are not limited to, the CBC and the SMMC grading and drainage requirements for new developments, would ensure that impacts associated with substantial erosion and loss of topsoil from potential future development would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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### **GEO-3                      The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.**

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Unstable geologic units are known to be present within the EIR Study Area. As discussed under impact discussion GEO-1, landslides have historically occurred and could continue to occur in areas with steeper slopes and less stable soil types. These include areas with steep slopes on the west and hilly areas of the EIR Study Area. Subsidence hazards are not known to be present in the EIR Study Area. Liquefaction



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susceptibility ranges from low in upland and hillside areas, to high along the bayfront and beside streams.

As discussed in Chapter 3, *Project Description*, of this Draft EIR, future development under the proposed project would occur in existing urban areas and would be concentrated on a limited number of vacant parcels and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing residential and residential-serving development. The areas of high liquefaction susceptibility are not located in the highly urbanized portions within the EIR Study Area where potential future development is anticipated to occur; therefore, future development under the proposed project is not expected to be intentionally located on a geologic unit or on soil that is unstable. However, there is the potential that future development could occur near areas of potential landslides, lateral spreading, subsidence, liquefaction, or collapse.

As determined in impact discussions GEO-1 and GEO-2, future development under the proposed project would be required to comply with the CBC, which provides regulations for building design and construction to ensure geologic and soil stability. Additionally, the City requires that geotechnical reports be prepared and submitted to the City prior to approval or construction of applicable projects pursuant to the requirements set forth in SMMC Chapter 23.08, Chapter 23.40, and Chapter 26.04. In addition to protections afforded by State laws, proposed General Plan goals, policies, and actions listed under impact discussion GEO-1 would require local planning and development decisions to consider potential risks of development on unstable soils or geologic units. Proposed Goal S-2 and Policies S 2.1, S 2.2, and S 2.4, specifically address the location of future development and include development standards that prohibit development in areas where there is a potential danger from geologic hazards.

All future development under the proposed project would be required to comply with State and local regulations, including SMMC provisions and proposed General Plan goals, policies, and actions that minimize impacts related to unstable geologic units and soils where landslide, lateral spreading, subsidence, liquefaction, or collapse could occur in the EIR Study Area. Proposed General Plan goals, policies, and actions would also require ongoing review, identification, and maintenance of maps and regulations related to geologic and seismic hazards. Therefore, implementation of proposed project would not result in development on a geologic unit or on soils that are unstable and could result in landslides, lateral spreading, subsidence, liquefaction, or collapse, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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GEO-4	The proposed project would not 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.
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While expansive soils are not common in the EIR Study Area, they could potentially exist in localized areas such as the Novato clay units found in hillside areas or Bay Mud geologic units underlying the eastern portions of the EIR Study Area. These soils are typically identified during project review stages and require specific engineering methods to reduce stresses to buildings and infrastructure. Because

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future development under the proposed project is anticipated to be concentrated in urbanized areas, it is not likely that development would occur in these portions of the EIR Study Area. However, in the event that future development is proposed in these portions of the EIR Study Area and is located on Novato clay or a Bay Mud geologic unit, a geotechnical investigation would be required to evaluate soil characteristics and identify mitigation if the soils are determined to be expansive. Such investigations are required by SMMC Chapter 23.08 which requires that future development proposed on expansive soils follow regulations imposed by the CBC, such as standards for seismic safety, excavation, foundations, retaining walls, site demolition, and grading activities including drainage and erosion control. Furthermore, requirements for geotechnical investigations at development site locations where potential hazards, including land instability, have already been identified are bolstered by various proposed General Plan goals, policies, and actions, as listed in impact discussion GEO-1.

Potential future development under the proposed project would be required to comply with existing regulations adopted to minimize development on expansive soils in the EIR Study Area as part of the City's project approval process. Potential future development would also comply with the proposed General Plan goals, policies, and actions that require ongoing review, identification, and maintenance of maps and regulations related to geologic and seismic hazards. Therefore, impacts would be *less-than-significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-5</b>	<b>The proposed project would not 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.</b>
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SMMC Chapter 7.38 requires all new construction to connect to the City's sanitary sewer system. Wastewater from new lots or parcels would be discharged into the existing public sanitary sewer system serviced by the City. Therefore, development in the EIR Study Area would not result in the use of septic tanks or alternative wastewater disposal systems.

Additionally, the Public Services and Facilities (PSF) Element of the proposed General Plan addresses public facility and infrastructure needs, such as community safety, water supply, sewer and storm drainage, energy supply, childcare and schools, healthcare and social services, and solid waste. The following General Plan 2040 goal and policies would serve to reduce impacts to sewer facilities:

- **Goal PSF-3:** Maintain sewer, storm drainage, and flood-control facilities adequate to serve existing needs, projected population, and employment growth and that provide protection from climate change risk.
  - **Policy PSF 3.2: Sewer Requirements for New Development.** Require new multifamily and commercial developments to evaluate the main sewer lines in the project vicinity, which will be used by the new development and make any improvements necessary to convey the additional sewage flows.

Compliance with SMMC Chapter 7.38 and the proposed General Plan goal and policy listed above would ensure that potential future development does result in septic tanks or alternative wastewater disposal

## GEOLOGY AND SOILS

systems where soils are not capable of adequately supporting such systems. Therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-6</b>	<b>The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.</b>
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No fossils, unique paleontological resources, or unique geologic features have been recorded in the EIR Study Area. The geology and soils in the EIR Study Area are common throughout the city and region and are not considered to be unique. However, geological formations underlying the EIR Study Area have the potential to contain unique paleontological resources.

Future development would be required to comply with the federal Paleontological Resources Preservation Act, which limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency, and the California Public Resources Code Section 5097, which prohibits the removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency.

Nevertheless, ground-disturbing construction activities (e.g., grading and excavation) associated with potential future development in the EIR Study Area could uncover fossilized remains of organisms from prehistoric environments that have not been recorded. Adherence to the Society of Vertebrate Paleontology's standards and protocols would ensure the protection of unique paleontological resources during construction of future development.<sup>27</sup> Such protocols include, but are not limited to:

- Excavations within a 50-foot radius of the find shall be temporarily halted or diverted.
- Ground-disturbance work shall cease until a City-approved, qualified paleontologist determines whether the resource requires further study.
- The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995) as appropriate, evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5.
- The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find.
- If is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The excavation plan shall be submitted to the City of San Mateo for review and approval prior to implementation.
- All construction activities shall adhere to the recommendations in the excavation plan.

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<sup>27</sup> Society of Vertebrate Paleontology, 2010, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*, [https://vertpaleo.org/wp-content/uploads/2021/01/SVP\\_Impact\\_Mitigation\\_Guidelines.pdf](https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf), accessed September 30, 2022.

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The Community Design and Historic Resources (CD) Element of the proposed General Plan guides the development and physical form of San Mateo from the individual neighborhood scale to the overall cityscape and includes actions to support preservation of the city's historic resources, including paleontological resources. The following General Plan 2040 goal and policies would serve to reduce impacts to paleontological resources:

- **Goal CD-4:** Protect archaeological and paleontological resources and resources that are culturally significant to Native American tribes and acknowledge San Mateo's past as indigenous land. Encourage development projects to recognize historical tribal lands.
- **Policy CD 4.6: Paleontological Resource Protection.** Prohibit the damage or destruction of paleontological resources, including prehistorically significant fossils, ruins, monuments, or objects of antiquity, that could potentially be caused by future development.
- **Action CD 4.9: Paleontological Resource Mitigation Protocol.** Prepare a list of protocols in accordance with Society of Vertebrate Paleontology standards that protect or mitigate impacts to paleontological resources, including requiring grading and construction projects to cease activity when a paleontological resource is discovered so it can be safely removed.

Implementation of the proposed General Plan goal, policy, and action listed above would ensure that impacts from future development under the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>GEO-7</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative geology and soils impacts in the area.</b>
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The cumulative setting for this analysis includes growth within the EIR Study Area in combination with projected growth in the rest of San Mateo County and the surrounding region. Anticipated development in the EIR Study Area would be subject to regulations pertaining to seismic safety, including the CBC and SMMC requirements. Compliance with these requirements would, to the maximum extent practicable, reduce cumulative, development-related impacts that pertain to seismic shaking, seismic-related ground failure, seismically induced landslides, soil erosion, and unstable soils. Similarly, compliance with relevant SMMC requirements, as well as the requirements of the CBC, would minimize the cumulative impacts associated with substantial erosion or loss of topsoil. While none of the soils in the EIR Study Area are considered to have unique geological resources, unique paleontological resources may occur. Site specific evaluation in the event that previously unknown resources are discovered during construction activities for new development or redevelopment would be required. Future development would be focused on specific sites or areas, which would be evaluated for site development constraints on a case-by-case basis and required to adhere to existing regulations as well as proposed General Plan goals, policies, and actions. Therefore, the proposed project would not result in a cumulatively considerable impact to geology and soils and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## GEOLOGY AND SOILS

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## GREENHOUSE GAS EMISSIONS

### 4.7 GREENHOUSE GAS EMISSIONS

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential greenhouse gas (GHG) emissions impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts from implementation of the proposed project.

#### 4.7.1 ENVIRONMENTAL SETTING

##### 4.7.1.1 TERMINOLOGY

The following are definitions for terms used throughout this chapter:

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a GHG absorbs relative to a molecule of carbon dioxide (CO<sub>2</sub>) over a given period (20, 100, and 500 years). CO<sub>2</sub> has a GWP of 1.
- **Carbon dioxide-equivalent (CO<sub>2</sub>e).** The standard unit to measure the amount of GHGs in terms of the amount of CO<sub>2</sub> that would cause the same amount of warming. CO<sub>2</sub>e is based on the GWP ratios between the various GHGs relative to CO<sub>2</sub>.
- **MTCO<sub>2</sub>e.** Metric ton of CO<sub>2</sub>e.
- **MMTCO<sub>2</sub>e.** Million metric tons of CO<sub>2</sub>e.

##### 4.7.1.2 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and ozone (O<sub>3</sub>)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified

## GREENHOUSE GAS EMISSIONS

by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.<sup>1,2</sup>

The major GHGs are briefly described below.

- **Carbon dioxide (CO<sub>2</sub>)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (i.e., sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock, and other agricultural practices, and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N<sub>2</sub>O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of applicable GHG emissions are shown in Table 4.7-1, *Greenhouse Gas Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>*. The GWP is used to convert GHGs to CO<sub>2</sub>-equivalence (CO<sub>2</sub>e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fifth Assessment Report (AR5) GWP values for methane (CH<sub>4</sub>), a project that generates 10 metric tons (MT) of CH<sub>4</sub> would be equivalent to 280 MT of CO<sub>2</sub>.

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<sup>1</sup> Water vapor (H<sub>2</sub>O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

<sup>2</sup> Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. The share of black carbon emissions from transportation is dropping rapidly and is expected to continue to do so between now and 2030 as a result of California's air quality programs. The remaining black carbon emissions will come largely from woodstoves/fireplaces, off-road applications, and industrial/commercial combustion. However, state and national GHG inventories do not include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

## GREENHOUSE GAS EMISSIONS

**TABLE 4.7-1 GREENHOUSE GAS EMISSIONS AND THEIR RELATIVE GLOBAL WARMING POTENTIAL COMPARED TO CO<sub>2</sub>**

GHGs	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO <sub>2</sub> <sup>a</sup>	Sixth Assessment Report (AR6) Global Warming Potential Relative to CO <sub>2</sub> <sup>a</sup>
Carbon Dioxide (CO <sub>2</sub> )	1	1
Methane (CH <sub>4</sub> ) <sup>b</sup>	28	30
Nitrous Oxide (N <sub>2</sub> O)	265	273

Notes: The IPCC published updated GWP values in its Sixth Assessment Report (AR6) that reflect latest information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO<sub>2</sub>. However, GWP values identified in AR5 are used by the 2022 Scoping Plan for long-term emissions forecasting. Therefore, this analysis utilizes AR5 GWP values consistent with the current Scoping Plan.

a. Based on 100-year time horizon of the GWP of the air pollutant compared to CO<sub>2</sub>.

b. The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO<sub>2</sub> is not included.

Sources: Intergovernmental Panel on Climate Change, 2013, Fifth Assessment Report: Climate Change 2013, <https://www.ipcc.ch/report/ar5/wg1/>; IPCC 2021, Sixth Assessment Report: Climate Change 2022, <https://www.ipcc.ch/assessment-report/ar6/>.

## Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities.

The recent Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) summarizes the latest scientific consensus on climate change. It finds that atmospheric concentrations of CO<sub>2</sub> have increased by 50 percent since the industrial revolution and continue to increase at a rate of two parts per million each year. By the 2030s, and no later than 2040, the world will exceed 1.5 degrees Celsius (°C) warming.<sup>3</sup> These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.<sup>4</sup> In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. Human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime.<sup>5</sup>

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict.

<sup>3</sup> California Air Resources Board, Draft 2022 Scoping Plan, <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>, accessed May 23, 2023.

<sup>4</sup> California Environmental Protection Agency, Climate Action Team, March 2006, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, <http://s3-us-west-2.amazonaws.com/uclcdc-nuxeo-ref-media/0bdec21c-ca2b-4f4d-9e11-35935ac4cf5f>, accessed May 23, 2023.

<sup>5</sup> Intergovernmental Panel on Climate Change, 2007, *Fourth Assessment Report: Climate Change 2007, Impacts, Adaptation and Vulnerability*, [https://www.ipcc.ch/site/assets/uploads/2018/03/ar4\\_wg2\\_full\\_report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/ar4_wg2_full_report.pdf), accessed May 23, 2023.

## GREENHOUSE GAS EMISSIONS

Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty—for example, on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

### Potential Climate Change Impacts for California

There is at least a greater than 50 percent likelihood that global warming will reach or exceed 1.5°C in the near-term, even for the very low GHG emissions scenario.<sup>6</sup> Climate change is already impacting California and will continue to affect it for the foreseeable future. For example, the average temperature in most areas of California is already 1°F higher than historical levels, and some areas have seen average increases in excess of 2°F.<sup>7</sup> The California Fourth Climate Change Assessment identifies the following climate change impacts under a business-as-usual scenario:

- Annual average daily high temperatures in California are expected to rise by 2.7°F by 2040, 5.8°F by 2070, and 8.8°F by 2100 compared to observed and modeled historical conditions. These changes are statewide averages. Heat waves are projected to become longer, more intense, and more frequent.
- Warming temperatures are expected to increase soil moisture loss and lead to drier seasonal conditions. Summer dryness may become prolonged, with soil drying beginning earlier in the spring and lasting longer into the fall and winter rainy season.
- High heat increases the risk of death from cardiovascular, respiratory, cerebrovascular, and other diseases.
- Droughts are likely to become more frequent and persistent.
- Climate change is projected to increase the strength of the most intense precipitation and storm events affecting California.

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<sup>6</sup> Intergovernmental Panel on Climate Change (IPCC). 2021. Sixth Assessment Report: Climate Change 2022. The Physical Science Basis. [https://report.ipcc.ch/ar6/wg1/IPCC\\_AR6\\_WGI\\_FullReport.pdf](https://report.ipcc.ch/ar6/wg1/IPCC_AR6_WGI_FullReport.pdf)

<sup>7</sup> California Office of Emergency Services (CalOES). 2020, June. California Adaptation Planning Guide. <https://www.caloes.ca.gov/HazardMitigationSite/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf>.

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- Mountain ranges in California are already seeing a reduction in the percentage of precipitation falling as snow. Snowpack levels are projected to decline significantly by 2100 due to reduced snowfall and faster snowmelt. California's water storage system is designed with the expectation that snow will stay frozen for many months, and that as it melts, it will be stored in a series of reservoirs and dams, many of which are used to generate electricity. Changing waterfall patterns therefore impact both water supply and electricity supply.
- Marine layer clouds are projected to decrease, though more research is needed to better understand their sensitivity to climate change.
- Extreme wildfires (i.e., fires larger than 10,000 hectares or 24,710 acres) would occur 50 percent more frequently. The maximum area burned statewide may increase 178 percent by the end of the century. Drought and reduced water supplies can increase wildfire risk.
- Exposure to wildfire smoke is linked to increased incidence of respiratory illness.
- Sea level rise is expected to continue to increase erosion of beaches, cliffs, and bluffs.<sup>8</sup>

Table 4.7-2, *Summary of Greenhouse Gas Emissions Risk to California*, shows the global climate change risks to California which include impacts public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

**TABLE 4.7-2 SUMMARY OF GREENHOUSE GAS EMISSIONS RISK TO CALIFORNIA**

Impact Category	Potential Risks
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Poor air quality made worse Higher temperatures increase ground-level ozone (i.e., smog) levels
Water Resource Impacts	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure

<sup>8</sup> California Office of Emergency Services (CalOES). 2020, June. California Adaptation Planning Guide.  
<https://www.caloes.ca.gov/HazardMitigationSite/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf>.



## GREENHOUSE GAS EMISSIONS

**TABLE 4.7-2 SUMMARY OF GREENHOUSE GAS EMISSIONS RISK TO CALIFORNIA**

Impact Category	Potential Risks
Forest and Biological Resource Impacts	<p>Increased risk and severity of wildfires</p> <p>Lengthening of the wildfire season</p> <p>Movement of forest areas</p> <p>Conversion of forest to grassland</p> <p>Declining forest productivity</p> <p>Increasing threats from pest and pathogens</p> <p>Shifting vegetation and species distribution</p> <p>Altered timing of migration and mating habits</p> <p>Loss of sensitive or slow-moving species</p>
Energy Demand Impacts	<p>Potential reduction in hydropower</p> <p>Increased energy demand</p>

Sources: California Climate Change Center (CCCC), July 2012, *Our Changing Climate 2012, Vulnerability and Adaptation to the Increasing Risks from Climate Change in California*; Climate Change Center (CCC), July 2006, *Our Changing Climate, Assessing the Risks to California*; Climate Change Center (CCC), May 2009, *The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California*; California Natural Resources Agency, July 2014, *Safeguarding California: Reducing Climate Risk, An Update to the 2009 California Climate Adaptation Strategy*; California Office of Emergency Services (CalOES). 2020, June. *California Adaptation Planning Guide*. <https://www.caloes.ca.gov/HazardMitigationSite/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf>.

- Water Resources Impacts.** By late this century, all projections show drying, and half of the projections suggest 30-year average precipitation will decline by more than 10 percent below the historical average. Even in projections with relatively little or no decline in precipitation, central and southern parts of the state are expected to be drier from the warming effects alone because the spring snowpack will melt sooner, and the moisture in soils will evaporate during long dry summer months.<sup>9</sup>
- Wildfire Risks.** Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Human activities will continue to be the biggest factor in ignition risk. The number of large fires statewide is estimated to increase by 58 percent to 128 percent above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57 percent to 169 percent, depending on location.<sup>10</sup>
- Health Impacts.** Many of the gravest threats to public health in California stem from the increase of extreme conditions, principally more frequent, more intense, and longer heat waves. Particular concern centers on the increasing tendency for multiple hot days in succession, and simultaneous heat waves in several regions throughout the state. Public health could also be affected by climate change impacts on air quality, food production, the amount and quality of water supplies, energy pricing and availability, and the spread of infectious diseases. Higher temperatures also increase

<sup>9</sup> California Council on Science and Technology, September 2012, *California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets*, <https://ccst.us/wp-content/uploads/2012ghg.pdf>, accessed May 23, 2023.

<sup>10</sup> California Council on Science and Technology, September 2012, *California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets*, <https://ccst.us/wp-content/uploads/2012ghg.pdf>, accessed May 23, 2023.

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ground-level ozone levels. Furthermore, wildfires can increase particulate air pollution in the major air basins of California.<sup>11</sup>

- **Increase Energy Demand.** Increases in average temperature and higher frequency of extreme heat events combined with new residential development across the state will drive up the demand for cooling in the increasingly hot and longer summer season and decrease demand for heating in the cooler season. Warmer, drier summers also increase system losses at natural gas plants (reduced efficiency in the electricity generation process at higher temperatures) and hydropower plants (lower reservoir levels). Transmission of electricity will also be affected by climate change. Transmission lines lose 7 percent to 8 percent of transmitting capacity in high temperatures while needing to transport greater loads. This means that more electricity needs to be produced to make up for the loss in capacity and the growing demand.<sup>12</sup>

### 4.7.1.3 REGULATORY FRAMEWORK

This section summarizes key federal, State, regional, and local regulations and programs related to GHG emissions resulting from the proposed project.

#### Federal Regulations

The US Environmental Protection Agency (USEPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.<sup>13</sup>

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identified emissions of six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and SF<sub>6</sub>—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, according to guidance by the BAAQMD, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

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<sup>11</sup> California Council on Science and Technology, September 2012, *California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets*, <https://ccst.us/wp-content/uploads/2012ghg.pdf>, accessed May 23, 2023.

<sup>12</sup> California Council on Science and Technology, September 2012, *California's Energy Future: Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Targets*, <https://ccst.us/wp-content/uploads/2012ghg.pdf>, accessed May 23, 2023.

<sup>13</sup> US Environmental Protection Agency, December 2009, EPA: Greenhouse Gases Threaten Public Health and the Environment. Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity. [https://archive.epa.gov/epapages/newsroom\\_archive/newsreleases/08d11a451131bca585257685005bf252.html](https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html).

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### *US Mandatory Report Rule for GHGs (2009)*

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO<sub>2</sub>e per year are required to submit an annual report.

### *Update to Corporate Average Fuel Economy Standards (2017 to 2026)*

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (MPG) in 2025. However, on March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG for model year 2026 vehicles (85 Federal Register 24174 (April 30, 2020)).

On December 21, 2021, under the direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration (NHTSA) repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, the National Highway Traffic Safety Administration (NHTSA) announced new proposed fuel standards on March 31, 2022. Fuel efficiency under the new standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annual for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which would be a 10 MPG increase relative to model year 2021.<sup>14</sup>

## State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05, EO B-30-15, EO B-55-18, Assembly Bill (AB) 3 , AB 1279, Senate Bill (SB) 32, and SB 375.

### *Executive Order S-03-05*

EO S-03-05 was signed June 1, 2005, and set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

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<sup>14</sup> National Highway Traffic Safety Administration, April 1, 2022, USDOT Announces New Vehicle Fuel Economy Standards for Model year 2024-2026. <https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026>, accessed on May 23, 2023.

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### *Assembly Bill 32, the Global Warming Solutions Act (2006)*

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05. CARB prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

### *Executive Order B-30-15*

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires State agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, *Safeguarding California*, in order to ensure climate change is accounted for in state planning and investment decisions.

### *Senate Bill 32 and Assembly Bill 197*

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the executive order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

### *Executive Order B-55-18*

Executive Order B-55-18, signed September 10, 2018, sets a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO<sub>2</sub>e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

### 2022 Climate Change Scoping Plan Update

CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State’s anthropogenic GHG emissions.<sup>15</sup> The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18 (discussed below) and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030

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<sup>15</sup> California Air Resources Board, December 2022, 2022 Scoping Plan for Achieving Carbon Neutrality, <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>, accessed May 23, 2023.

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target. This plan expands upon earlier Scoping Plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the recent Sixth Assessment Report (AR6) of the IPCC and the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB's 2022 Scoping Plan identifies strategies as shown in Table 4.7-3, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process towards the State's carbon neutrality goals.

**TABLE 4.7-3 PRIORITY STRATEGIES FOR LOCAL GOVERNMENT CLIMATE ACTION PLANS**

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide EV charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
VMT Reduction	Reduce or eliminate minimum parking standards.
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
Building Decarbonization	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements)
	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances.
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing)
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Source: California Air Resources Board, 2022, Draft 2022 Scoping Plan, <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>, accessed May 23, 2023.

For residential and mixed-use development projects, CARB recommends this first approach to demonstrate that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously



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advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

### Transportation Electrification

- Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.

### VMT Reduction

- Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
- Does not result in the loss or conversion of the State's natural and working lands;
- Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS);
- Reduces parking requirements by:
  - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
  - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or
  - For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
- At least 20 percent of the units are affordable to lower-income residents;
- Result in no net loss of existing affordable units.

### Building Decarbonization

- Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.

The second approach to project-level alignment with State climate goals is net zero GHG emissions. The third approach to demonstrating project-level alignment with State climate goals is to align with GHG thresholds of significance, which many local air quality management (AQMDs) and air pollution control districts (APCDs) have developed or adopted.<sup>16</sup>

### *Assembly Bill 1279*

Assembly Bill 1279, signed by Governor Newsom in September 2022, codified the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below

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<sup>16</sup> California Air Resources Board (CARB). 2022, December. 2022 Scoping Plan for Achieving Carbon Neutrality, <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>, accessed May 23, 2023.

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1990 levels for anthropogenic GHG emissions. CARB will be required to update the scoping plan to identify and recommend measures to achieve the net-zero and GHG emissions-reduction goals.

### *Senate Bill 375*

SB 375, the Sustainable Communities and Climate Protection Act, was adopted in 2008 to connect the GHG emissions reduction targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPO). Metropolitan Transportation Commission (MTC) is the MPO for the Bay region, which includes Napa, Marin, San Francisco, and Contra Costa counties. Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

### 2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and recently released another update in February 2018, which became effective in October 2018. CARB adopted the updated targets and methodology on March 22, 2018. All SCSs adopted after October 1, 2018, are subject to these new targets. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks compared to 2005. This excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translates into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted sustainable communities strategies (SCS). As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 MMTCO<sub>2</sub>e in 2035 compared to the current targets.<sup>17</sup>

### *Transportation Sector Specific Regulations*

#### Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to

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<sup>17</sup> California Air Resources Board (CARB). 2018, February. Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets. [https://ww2.arb.ca.gov/sites/default/files/2020-06/SB375\\_Updated\\_Final\\_Target\\_Staff\\_Report\\_2018.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-06/SB375_Updated_Final_Target_Staff_Report_2018.pdf).

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California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. (See also the previous discussion in federal regulations under “Update to Corporate Average Fuel Economy Standards [2017 to 2026].”)

In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZE vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

### Advanced Clean Fleets and Advanced Clean Trucks

In April 2023, CARB adopted the Advanced Clean Cars II rule (AC II), which requires all new passenger vehicles, trucks, and SUVs sold in California to be zero emissions by 2035. The regulation amends the Zero-emission Vehicle Regulation to require an increasing number of zero-emission vehicles to support Governor Newsom’s 2020 EO N-79-20 and amends the Low-emission Vehicle Regulations to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions. This rule will substantially reduce air pollutants that threaten public health and would further develop the zero-emission vehicle market starting with the 2026 model year.

In April 2023, CARB approved the Advanced Clean Fleets, which requires a phased-in transition toward zero-emission medium-and-heavy duty vehicles. Under the new rule, fleet owners operating vehicles for private services (such as Postal Service, state and local government fleets) will begin their transition toward zero-emission vehicles starting in 2024. The rule also requires an end to combustion truck sales in 2036 and follows the 2020 adoption of the Advanced Clean Trucks rule, which put in place a requirement for manufacturers to increase the sale of zero-emission trucks.

### Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. EO S 01 07 set a declining standard for GHG emissions measured in CO<sub>2</sub>e gram per unit of fuel energy sold in California. The LCFS required a reduction of 2.5 percent in the carbon intensity of California’s transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applied to refiners, blenders, producers, and importers of transportation fuels, and used market-based mechanisms to allow these providers to choose the most economically feasible methods for reducing emissions during the “fuel cycle.”

### Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle (EV) charging stations). EO B 16-2012 also directed the number of ZE vehicles in California’s state vehicle fleet to

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increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also established a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

### Executive Order N-79-20

On September 23, 2020, Governor Newsom signed EO N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The EO's goal for the state is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.

### ***Renewables Portfolio: Carbon Neutrality Regulations***

#### Senate Bills 1078, 107, and X1-2 and Executive Order S 14 08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. EO S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production decreases indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

#### Senate Bill 350

Senate Bill 350 (de Leon) was signed into law in September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

#### Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consists of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

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### Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. SB 1020 provides interim RPS targets (90 percent renewable energy by 2035 and 95 percent renewable energy by 2040) and requires renewable energy and zero-carbon resources to reach 100 percent clean electricity by 2045.

### *Energy Efficiency Regulations*

#### California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods.

The 2022 Building Energy Efficiency Standards were adopted on August 11, 2021, and went into effect on January 1, 2023. The 2022 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, strengthen ventilation standards, and more. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.<sup>18</sup>

#### California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen standards became effective on January 1, 2023.

### 2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

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<sup>18</sup> California Energy Commission (CEC). 2021, May 19. Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.



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### *Solid Waste Diversion Regulations*

#### AB 939: Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code Section 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the Act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

#### AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

#### AB 1327

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code Section 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

#### AB 1826

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

### *Water Efficiency Regulations*

#### SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirement (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management

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plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of a 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

### AB 1881: Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves, to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

### *Short-Lived Climate Pollutant Reduction Strategy*

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and methane. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017a). In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

## Regional Regulations

### *Plan Bay Area: Strategy for a Sustainable Region*

MTC and Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 on October 21, 2021.<sup>19</sup> Plan Bay Area 2050 provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Under the Plan Bay Area 2050 strategies, just under half of all Bay Area households would live within one half-mile of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease

<sup>19</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, 2021, October. Plan Bay Area 2050. [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed May 23, 2023.

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significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19-percent reduction in per-capita emissions by 2035 — but only if all strategies are implemented.<sup>20</sup>

To achieve MTC's/ABAG's sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. Parts of the City of San Mateo lies within identified PDAs.<sup>21</sup>

### *Bay Area Clean Air Plan*

BAAQMD adopted the 2017 Clean Air Plan, Spare the Air, Cool the Climate on April 19, 2017. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.<sup>22</sup>

A comprehensive multipollutant control strategy has been developed to be implemented in the next 3 to 5 years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases.

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<sup>20</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, 2021, October. Plan Bay Area 2050. [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed May 23, 2023.

<sup>21</sup> Association of Bay Area Governments/Metropolitan Transportation Commission, 2023, May (updated). Priority Development Areas (PDAs). <https://opendata-mtc.opendata.arcgis.com/datasets/4df9cb38d77346a289252ced4ffa0ca0/explore?location=37.892240%2C-122.289021%2C9.00>.

<sup>22</sup> Bay Area Air Quality Management District, 2017, Spare the Air: Cool the Climate, Final 2017 Clean Air Plan, [https://www.baaqmd.gov/~/\\_media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf?la=en](https://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 May 23, 2023.

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- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.

### *Bay Area Commuter Benefits Program*

Under Air District Regulation 14, Model Source Emissions Reduction Measures, Rule 1, Bay Area Commuter Benefits Program, employers with 50 or more full-time employees within the BAAQMD are required to register and offer commuter benefits to employees. In partnership with the BAAQMD and the MTC, the rule's purpose is to improve air quality, reduce GHG emissions, and decrease the Bay Area's traffic congestion by encouraging employees to use alternative commute modes, such as transit, vanpool, carpool, bicycling, and walking. The benefits program allows employees to choose from one of four commuter benefit options including a pre-tax benefit, employer-provided subsidy, employer-provided transit, and alternative commute benefit.

## Local Regulations

### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to greenhouse gas emissions are primarily in the Land Use Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.7.3, *Impact Discussion*.

### *2020 Climate Action Plan*

Adopted in April 2020, the current San Mateo CAP is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.<sup>23</sup> The CAP allows City decision-makers and the community to understand the sources and magnitude of local GHG emissions and identifies a strategy, reduction measures, and implementation actions the City will use to achieve targets consistent with State recommendations of 15 percent below 2005 emissions levels by 2020, 4.3 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) per person by 2030, and 1.2 MTCO<sub>2</sub>e per person by 2050. The CAP, adopted in 2020, updated and expanded the City's goals, measures, and actions to address GHG emissions from the energy, water, transportation, solid waste, and off-road equipment sectors. It also revises San Mateo's implementation program and framework to monitor and report progress. A technical update to the CAP with updated inventories and forecasts has been conducted as part of the proposed project.

<sup>23</sup> City of San Mateo, April 2020, *2020 Climate Action Plan*, [cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=](https://cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=), accessed May 25, 2023.

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### *City of San Mateo Municipal Code*

The San Mateo Municipal Code (SMMC) includes various directives pertaining to air quality. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to air quality impacts are included in Title 7, *Health, Sanitation and Public Nuisance*, Title 13, *Parks and Recreation*, Title 23, *Buildings and Construction*, Title 24, *Transportation System Management (TSM)*, and Title 27, *Zoning*.

- Chapter 7.35, *Mandatory Organic Waste Disposal Reduction Ordinance*, list requirements for organic waste generators, in compliance with state recycling laws, state organic recycling laws, and the Short-Lived Climate Pollutant Reduction Act of 2016.
- Chapter 13.40, *Protected Trees*, protects, preserves, and replenishes healthy and valuable trees in the City for the health and welfare of residents and in order to counteract air pollutants and maintain climatic balances, among reasons.
- Chapter 23.24, *Energy Code*, adopts the 2022 edition of the California Energy Code and includes local amendments. Section 23.24.030, *Local Amendment Regarding Mandatory Solar Installations*, require new residential buildings four stories or more and new non-residential buildings with less than 10,000 square feet of gross floor area to provide a minimum of 3-kilowatt photovoltaic system. New residential buildings with greater than or equal to 10,000 square feet of gross floor area need to provide a minimum of 5-kilowatt photovoltaic system. Section 23.24.040, *Local Amendment Regarding All-Electric Requirements for Residential Buildings and Buildings with Office Use*, requires all newly constructed office and residential buildings to be designed, constructed, and equipped as all-electric buildings. Section 23.24.050, *Local Amendment Regarding All-Electric or Energy Efficiency Standards for High-Rise Multifamily Residential Buildings with 100% Affordable Units*, and Section 23.26.040, *Local Amendment Regarding All-Electric Buildings or Energy Efficiency Standards for Low-Rise Residential Buildings with 100% Affordable Units*, outlines the standards for low-rise and high-rise residential buildings with 100% affordable units.
- Chapter 23.44, *Electric Vehicle Charging Stations*, outlines the requirements and submittal process of an EV charging permit application.
- Chapter 23.46, *Small Residential Rooftop Solar Energy Systems*, provides an expedited, streamlined solar energy system permitting process that complies with state laws. This chapter encourages the use of solar energy systems by removing unreasonable barriers, minimizing costs to property owners and the City, and expanding the ability of property owners to install solar energy systems while protecting the public health and safety.
- Chapter 23.70, *Green Building Code*, adopts the 2022 edition of the California Green Building Standards Code, and includes local amendments regarding EV charging and space design for different types of new constructions.
- Chapter 24.01, *Transportation System Management*, encourages participation in an inter-city authority that works in partnership with employers to promote programs and services that help employers achieve their trip reduction goals in an effort to improve air quality and reduce traffic congestion in the region; facilitation of the achievement of vehicle to employee ratio standards by public and private employers subject to Regulation 13, Rule 1; and encouragement and facilitation of



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participation by employers with 25-99 employees in promoting commute alternatives to their employees.

- Chapter 27.90, *TOD District – Transit Oriented Development*, implements the San Mateo Corridor Transit Oriented Development Plan in the Transit Oriented Development (TOD) district to encourage more insensitive development within walking distance of transit stops. TOD is intended to provide for an integrated mix of land uses that support transit use through site design that enhances accessibility to stations and is supportive of pedestrian and bicycle use.

### 4.7.1.4 EXISTING CONDITIONS

This GHG evaluation was prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) to determine if significant GHG impacts are likely to occur in conjunction with future development that would be accommodated by the proposed project.

The EIR Study Area's GHG emissions inventory conducted for the proposed CAP update includes the following sectors:

- **On-Road Transportation:** on-road vehicle trips on local roads and State highways within the city limits.
- **Energy:** electricity and natural gas used in nonresidential (e.g., industrial, commercial) and residential settings, including direct access electricity.
- **Off-road Equipment:** the use of portable equipment and vehicles that do not travel on roads (e.g., construction or lawn and garden equipment).
- **Solid Waste generation:** material produced by the community that is deposited in landfills which decompose and produce methane.
- **Landfills:** emissions that occur in the inventory year as a result of waste-in-place at a landfill that is within the community boundary or operated by the City.
- **Rail:** emissions resulting from Caltrain trips generated by passengers at three stations: San Mateo, Hayward Park, and Hillsdale, as well as emissions from freight trains.
- **Water and Wastewater:** energy used to treat and pump water used and wastewater created, along with emissions from the processing of wastewater.
- **Land use and sequestration:** emissions resulting from development of previously undeveloped land and sinks (negative emissions) from carbon sequestration of open space and urban trees.
- **Point sources:** stationary source emissions resulting from fossil fuel combustion within the county as reported by the BAAQMD. These emissions are included as an informational item and are not counted as part of the City's total emissions based on guidance from BAAQMD as they are not under the jurisdiction of the City.

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Industrial sources of emissions that require a permit to operate from BAAQMD are not included in the community inventory. However, due to the 15/15 Rule,<sup>24</sup> natural gas and electricity use data for industrial land uses may also be aggregated with the nonresidential land uses in the data provided by PG&E and PCE. Life-cycle emissions are not included in this analysis because not enough information is available for the proposed project, and therefore, would be speculative. Black carbon emissions are not included in the GHG analysis because CARB does not include this pollutant in the state's GHG emissions inventory and treats this short-lived climate pollutant separately.

### Community Emissions

Land uses in the EIR Study Area generate GHG emissions from natural gas used for energy, heating, and cooking; electricity usage; vehicle trips; and area sources such as landscaping and consumer cleaning products. Emissions associated with the EIR Study Area are shown in Table 4.7-4, *Existing 2019 Greenhouse Gas Emissions Inventory*.

**TABLE 4.7-4 EXISTING 2019 GREENHOUSE GAS EMISSIONS INVENTORY**

Emissions Sector	Existing MTCO <sub>2</sub> e			% of Total
	City	SOI	Total	
Residential Built Environment	114,620	3,700	118,320	22%
Commercial/Industrial Built Environment	83,660	1,480	85,140	16%
On-road Transportation	276,560	7,720	284,280	53%
Off-road Equipment	14,400	180	14,580	3%
Rail	4,440	110	4,550	1%
Solid Waste Generation	21,910	610	22,520	4%
Landfill	4,180	0	4,180	1%
Water and Wastewater	1,660	50	1,710	<1%
Land Use and Sequestration	-1,050	-270	-1,320	<1%
<b>Total Community Emissions (with Existing Actions and CAP measures)</b>	<b>520,380</b>	<b>13,580</b>	<b>533,960</b>	<b>100%</b>
Service Population (SP)	165,830	4,630	170,460	NA
MTCO <sub>2</sub> e/SP	3.1	2.9	3.1	NA

Source: Based on the emissions inventory and forecast being conducted for the San Mateo Climate Action Plan, 2023.

<sup>24</sup> The 15/15 Rule was adopted by the California Public Utility Commission in the Direct Access Proceeding (CPUC Decision 97-10-031) to protect customer confidentiality. The 15/15 Rule requires that any aggregated information provided by the utilities must be made up of at least 15 customers (100 for residential sectors) and a single customer's load must be less than 15 percent of an assigned category.

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### 4.7.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant greenhouse gas emissions impact if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
3. In combination with past, present, and reasonably foreseeable projects, result in cumulative greenhouse gas emission impacts in the area.

BAAQMD's *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* (2022) contains instructions on how to evaluate, measure, and mitigate GHG impacts generated from land use development projects and plans. For purposes of this analysis, the City of San Mateo is using BAAQMD's current GHG plan-level significance thresholds to evaluate the proposed project's potential impacts related to GHG emissions.

### Greenhouse Gas Emission Impacts

BAAQMD, in its *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans* (2022) (GHG Justification Report), recommends the use of one of two plan-level criteria to determine the GHG emission impact resulting from a proposed plan. If a proposed plan cannot demonstrate consistency with the BAAQMD-recommended Criterion A or Criterion B, that plan would result in a potentially significant impact related to GHG emissions.

- A. The Plan must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b); or
- B. The Plan must meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045.

The City's current CAP stands as the City's local reduction strategy; however, the City's current CAP does not demonstrate consistency with the latest legislative reduction target established by AB 1279. In addition, while the proposed project includes an update to the City's CAP that demonstrates consistency with the AB 1279 reduction targets, as is discussed further under impact discussion GHG-1, the proposed CAP update must first be adopted through a public process following an environmental review (this Draft EIR) to meet the criteria set forth under CEQA Guidelines Section 15183.5(b) and be used for a streamlined GHG analysis (Criterion A). Therefore, Criterion B is used herein to determine the proposed General Plan's GHG emissions impacts.

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CEQA Guidelines Section 15183.5(b), *Tiering and Streamlining the Analysis of Greenhouse Gas Emissions*, allows for lead agencies to analyze and mitigate the significant effects of GHG emissions at a programmatic level. Pursuant to CEQA Guidelines Section 15183.5(b), later project specific

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environmental documents may tier from and/or incorporate by reference the GHG reduction plan so long as it includes the following plan elements:

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
- Be adopted in a public process following environmental review.

The current San Mateo CAP was adopted by the City Council in April of 2020 and was a direct update to the City's 2015 CAP.<sup>25</sup> The current CAP provides an updated baseline emissions inventory and forecast, which aligns the City's GHG reduction efforts with State-recommended targets. Should the proposed General Plan and CAP update demonstrate consistency with BAAQMD's significance criteria of meeting the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045, and meet all of the criteria listed above from CEQA Guidelines Section 15183.5(b), the proposed CAP update may be used for streamlined GHG analyses for future individual development projects, consistent with the provisions contained in CEQA Guidelines Section 15183.5.

### Greenhouse Gas Plan Consistency

To determine whether the proposed project is consistent with the applicable plan or policy adopted for the purpose of reducing GHG emissions, the proposed project is analyzed for consistency with applicable policies contained in the City's current CAP, the State's Scoping Plan, and ABAG/MTC's Plan Bay Area. It should be noted that the proposed project, which includes a technical update to the City's CAP, builds on the existing CAP's emission reduction strategies and updates the emissions inventory and forecast to align with current legislative reduction targets established by SB 32 and AB 1279. Therefore, only the proposed General Plan is analyzed in impact discussion GHG-2 for its consistency with the City's existing CAP.

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<sup>25</sup> San Mateo, City of. 2020, April. San Mateo 2020: Climate Action Plan, <https://www.cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=>, accessed May 23, 2023.

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### 4.7.3 IMPACT DISCUSSION

<b>GHG-1</b>	<b>The proposed project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.</b>
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A project does not generate enough GHG emissions on its own to influence global climate change; therefore, this section measures the proposed project's contribution to the cumulative environmental impact associated with GHG emissions. The proposed General Plan and CAP update builds on the current CAP and provides an updated emissions inventory and forecast that demonstrates consistency with BAAQMD's significance criteria of meeting the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045.

As shown in Table 4.7-5, *City of San Mateo GHG Emissions Forecast*, the proposed project would result in a reduction in community-wide GHG emissions of 49 percent by 2030 and 87 percent by 2045 when compared to 2005 community-wide emission levels, consistent with the reduction goals established by SB 32 and AB 1279.

**TABLE 4.7-5 CITY OF SAN MATEO GHG EMISSIONS FORECAST**

Emissions Sector	Existing GHG Emissions (MTCO <sub>2</sub> e/Year)					
	Baseline	Percentage	Year 2030	Percentage	Year 2045	Percentage
On-Road Transportation	282,370	42%	308,930	51%	375,310	50%
Commercial/industrial built environment	169,000	25%	93,710	15%	109,610	15%
Residential built environment	163,770	25%	141,960	23%	190,110	25%
Solid Waste generation	22,180	3%	23,770	4%	30,360	4%
Off-road equipment	15,900	2%	26,240	4%	33,650	4%
Landfill	7,370	1%	4,470	1%	3,310	0%
Rail	4,350	1%	5,220	1%	6,560	1%
Water and Wastewater	2,520	0%	1,990	0%	2,540	0%
Land use and sequestration	-1,050	-1%	-1,050	0%	-1,050	0%
<b>Total Community Emissions (BAU)</b>	<b>666,410</b>	<b>100%</b>	<b>605,240</b>	<b>100%</b>	<b>750,400</b>	<b>100%</b>
<b>Total Community Emissions (with Existing State Actions and CAP GHG Measures)</b>	<b>—</b>	<b>—</b>	<b>311,990</b>	<b>—</b>	<b>80,550</b>	<b>—</b>
SB 32 and AB 1279 Target for Year 2030 and 2045	—	—	339,880	-49%	84,970	-87%
Target achieved?	—	—	Yes	—	Yes	—
Service Population (SP)	—	—	198,610	—	254,680	—
MTCO <sub>2</sub> e/SP	—	—	1.6	—	0.3	—

Notes: BAU = business as usual; estimates do not incorporate any emission reductions from statewide or CAP reduction measures.

Source: Based on the emissions inventory and forecast being conducted for the San Mateo Climate Action Plan, 2023.



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As identified in Table 4.7-5, the proposed project would be consistent with the current long-term legislative reduction targets under SB 32 and AB 1279, which is attributable to both Statewide emission reduction strategies such as CARB's Advanced Clean Cars II and Advanced Clean Fleets Regulations as well as various goals and policies contained in the proposed General Plan and CAP update.

The Circulation (C) and Land Use (LU) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider GHG emissions. The following General Plan 2040 goals, policies, and actions would serve to minimize GHG emissions and mobile-source emissions:

- **Goal C-1:** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.
  - **Policy C 1.1: Sustainable Transportation.** Reduce greenhouse gas (GHG) emissions from transportation by increasing mode share options for sustainable travel modes, such as walking, bicycling, and public transit.
  - **Policy C 1.2: Complete Streets.** Apply complete streets design standards to future projects in the public right-of-way and on private property. Complete streets are streets designed to facilitate safe, comfortable, and efficient travel for all users regardless of age or ability or whether they are walking, bicycling, taking transit, or driving, and should include landscaping and shade trees as well as green streets stormwater infrastructure to reduce runoff and pollution.
  - **Policy C 1.4: Prioritize Pedestrian and Bicycle Mobility Needs.** Prioritize local pedestrian and bicycle projects that enhance mobility, connectivity, and safety when designing roadway and intersection improvements.
  - **Policy C 1.6: Transit-Oriented Development.** Increase access to transit and sustainable transportation options by encouraging high-density, mixed-use transit-oriented development near the City's Caltrain stations and transit corridors.
  - **Action C 1.14: Transit-Oriented Development Pedestrian Access Plan.** Coordinate with interagency partners and community stakeholders to seek funding opportunities to design, construct, and build the priority projects identified in the Transit-Oriented Development Pedestrian Access Plan.
- **Goal C-2:** Use transportation demand management (TDM) to reduce the number and length of single-occupancy vehicle trips through policy, zoning strategies, and targeted programs and incentives.
  - **Policy C 2.1: TDM Requirements.** Require new or existing developments that meet specific size, capacity, and/or context conditions to implement TDM strategies.
  - **Action C 2.2: Implement TDM Ordinance.** Develop and implement a citywide TDM ordinance for new developments with tiered trip reduction and VMT reduction targets and monitoring that are consistent with the targets in their relevant area plans. Reduce parking requirements for projects that include TDM measures.

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- **Action C 2.7: New Development Shuttle Services.** Encourage new developments to provide shuttle services as an option to fulfill TDM requirements. Shuttles should serve activity centers, such as the College of San Mateo, Caltrain stations, downtown, the Hillsdale Shopping Center, or other areas and should accommodate the needs and schedules of all riders, including service workers.
- **Goal C-3:** Build and maintain a safe, connected, and equitable pedestrian network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.
  - **Policy C 3.1: Pedestrian Network.** Create and maintain a safe, walkable environment in San Mateo to increase the number of pedestrians. Maintain an updated recommended pedestrian network for implementation. Encourage “superblock” or similar design in certain nodes of the city, such as the downtown, that allows vehicle access at the periphery and limits cut-through vehicles to create pedestrian-focused, car-light spaces.
  - **Policy C 3.2: Pedestrian Enhancements with New Development.** Require new development projects to provide sidewalks and pedestrian ramps and to repair or replace damaged sidewalks, in addition to right-of-way improvements identified in adopted City master plans. Encourage new developments to include pedestrian-oriented design to facilitate pedestrian path of travel.
  - **Action C 3.7: Pedestrian Connectivity.** Incorporate design for pedestrian connectivity across intersections in transportation projects to improve visibility at crosswalks for pedestrians and provide safe interaction with other modes. Design improvements should focus on increasing sight lines and removing conflicts at crosswalks.
- **Goal C-4:** Build and maintain a safe, connected, and equitable bicycle and micromobility network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.
  - **Policy C 4.1: Bicycle Network.** Create and maintain a bicycle-friendly environment in San Mateo and increase the number of people who choose to bicycle.
  - **Policy C 4.3: First- and Last-Mile Connections.** Encourage and facilitate provision of bicycle parking and shared mobility options at transit centers and other community destinations to provide first- and last-mile connections.
  - **Policy C 4.6: Bicycle Improvements.** Require new developments to construct or contribute to improvements that enhance the cyclist experience, including bicycle lanes.
  - **Action C 4.9: Bicycle Master Plan Implementation.** Implement the Bicycle Master Plan’s recommended programs and projects to create and maintain a fully connected, safe, and logical bikeway network and coordinate with the countywide system. Update the Bicycle Master Plan and related adopted City plans to reflect future bicycle and micromobility facility needs to support the City’s circulation network.
- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.

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- **Policy LU 1.4: Mixed-Use.** Encourage mixed-use developments to include increased residential components to provide greater proximity between jobs and housing, promote pedestrian activity, and reduce traffic congestion and vehicle miles traveled (VMT).
- **Goal LU-3:** Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.
  - **Policy LU 3.7: Visitor Economy.** Collaborate with other Peninsula cities and the San Mateo County/Silicon Valley Convention and Visitors Bureau to support the continued development of the visitor economy of both the city and the region, including lodging, entertainment, recreation, retail, and local events; encourage uses that attract visitors. Incentivize through fee reduction and visitor perks, sustainable modes of travel to and from the city to reduce both the use of air travel and gas-powered vehicles.
  - **Policy LU 3.8: Workplaces.** Develop office buildings and business parks to facilitate transit, pedestrian, and bicycle commutes. Provide compact development, mixed uses, and connectivity to transit to reduce vehicle miles traveled (VMT).
- **Goal LU-10:** Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.
  - **Action LU 10.10: Clean Fuel Infrastructure.** Support efforts to build electric vehicle charging stations and clean fuel stations in San Mateo, including hydrogen and sustainably sourced biofuels, as supported by market conditions.

The following GHG reduction measures in the proposed CAP update (which are carried forward from the City's current CAP, with minor wording changes) also provide mandates with a mix of education and outreach programs to encourage GHG reduction efforts:

- Building Electrification BE 1 through BE 2 and Land Use Element Goal LU-10, would promote all-electric buildings for new construction and redevelopment projects.
- Renewable Energy RE 1 through RE 3, would increase the amount of energy in the community from renewable sources to further reduce GHG emissions and reduce the cost of electricity for residents.
- Energy Efficiency EE 1 and EE 2, seeks to provide opportunities for businesses and residents to conserve energy and maximize efficiency with incorporation of green building standards in the local and State building codes.
- Municipal Energy Efficiency and Electrification ME 1 through ME 3, serves to construct new and retrofit existing City-owned facilities to receive most or all of their energy from electricity to be more energy efficient.
- Clean Transportation Fuels CF 2 through CF 4, promotes clean transportation fuels, such as electricity or hydrogen, in the municipal fleet and EV charging stations within the community.
- Sustainable Transportation Fuels ST 1 through ST 7, promotes equity and reduce GHG emissions by providing safe, reliable alternative transit options.

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- Solid Waste SW 1 through SW 3, promotes minimizing waste generation through expanded recycling services and encouraging source reduction through innovative programs.
- Water and Wastewater WW 1 through WW 3, increases the efficiency of water usage in existing buildings, new construction, and landscaping.

Individual development projects facilitated by the proposed project would experience emission reductions from implementation of State measures and strategies to reduce Statewide GHG emissions, such as the LCFS mandate or RPS requirements. The proposed General Plan goals, policies, and actions above, and the strategies that would be maintained from the City's CAP under the proposed technical update to the CAP, would serve to further support potential GHG reductions for individual development projects facilitated by the proposed project. Furthermore, should the proposed CAP update be adopted and be used for future streamlined GHG analysis for individual development projects, those individual projects would be required to implement all the measures in the CAP Consistency Checklist during the planning entitlement phase to ensure that project's emissions are consistent with the communitywide emissions forecast contained herein. Therefore, this impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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GHG-2	The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
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In addition to a consistency analysis with the City's CAP, the following section discusses consistency with other applicable plans adopted for the purpose of reducing GHG emissions, which include CARB's Scoping Plan and MTC/ABAG's *Plan Bay Area 2050*.

### San Mateo 2020 Climate Action Plan

As mentioned prior, the City's current CAP was developed and adopted by City Council in April 2020 as a direct update to the 2015 CAP.<sup>26</sup> The current CAP provides community-wide emissions forecasts for 2030 and 2050. The current CAP also establishes per-capita GHG emissions targets for years 2030 and 2050 based on the State's recommended per-capita targets for local efforts, which are consistent with SB 32 and EO S-03-05. The current CAP identifies State and local measures to reduce GHG emissions and quantified GHG reductions associated with these measures.

The proposed project, which includes a technical update to the City's CAP, builds on the existing CAP's emission reduction strategies and updates the emissions inventory and forecast to align with current legislative reduction targets established by SB 32 and AB 1279. The proposed project is considered consistent with the City's CAP. Nonetheless, the proposed General Plan portion of the proposed project's consistency with the applicable CAP measures found in Appendix 3 of the CAP, *Standards for CAP*

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<sup>26</sup> City of San Mateo, April 2020, *San Mateo 2020: Climate Action Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=>, accessed May 23, 2023.

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*Consistency – New Development*, is shown in Table 4.7-6, *Consistency Analysis with the City of San Mateo Climate Action Plan*.<sup>27</sup>

**TABLE 4.7-6 CONSISTENCY ANALYSIS WITH THE CITY OF SAN MATEO CLIMATE ACTION PLAN**

Reduction Measure and Applicable Standard	Consistency Analysis
<b>Transportation &amp; Land Use</b>	
BE 1. All new development: The project does not have natural gas connections, and does not have any natural gas appliances or other equipment installed	<b>Consistent.</b> Future development under the proposed project would be required to be constructed in accordance with current State and City building codes in existence at the time. This includes the City's local amendment to the State Building Code Title 24 to require all-electric buildings for any new buildings, including commercial properties, and enhanced EV charging infrastructure beyond state requirements.
RE 2. All new developments with residential units: The project includes an on-site renewable energy system that meets or exceeds the minimum requirements of the California State Building Code	<b>Consistent.</b> Future residential development under the proposed project would be required to be constructed in accordance with current State and City building codes in existence at the time, which include requirements related to on-site renewable energy systems. For example, Chapter 23.46, <i>Small Residential Rooftop Solar Energy Systems</i> , in the City's Municipal Code provides a streamlined solar energy system permitting process that complies with the Solar Rights Act and AB 2188 for cost-effective solar energy systems installations.
RE 2. All new developments with residential units: The project includes an on-site energy storage system, such as a battery.	<b>Consistent.</b> Future residential development under the proposed project would be required to be constructed in accordance with current State and City building codes in existence at the time, which include requirements related to on-site energy storage systems. For example, Chapter 23.46, <i>Small Residential Rooftop Solar Energy Systems</i> , in the City's Municipal Code provides a streamlined solar energy system permitting process that complies with the Solar Rights Act and AB 2188 for cost-effective solar energy systems installations.
RE 3. All new developments with nonresidential space: The project includes an on-site renewable energy system that meets or exceeds the minimum requirements of the California State Building Code	<b>Consistent.</b> Future nonresidential development under the proposed project would be required to be constructed in accordance with current State and City building codes in existence at the time, which include requirements related to on-site renewable energy systems.
RE 3. All new developments with nonresidential space: The project includes an on-site energy storage system, such as a battery.	<b>Consistent.</b> Future nonresidential development that could occur under the proposed project would be required to be constructed in accordance with current State and City building codes in existence at the time, which include requirements related to on-site energy storage systems. The City's new reach codes require enhanced EV charging infrastructure for new construction projects above the State requirements.
EE 3. All new developments with residential units: The project includes trees that provide shade to residences.	<b>Consistent.</b> The City would review implementing trees to provide shade for future residential development to be consistent with this policy. As mentioned in Section 3.4, <i>Project Objectives</i> , one of the primary purposes of the proposed project is to protect natural resources, such as trees and open spaces for public health and safety.

<sup>27</sup> City of San Mateo, April 2020, *San Mateo 2020: Climate Action Plan: Appendix 3*, <https://www.cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=>, accessed May 23, 2023.



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**TABLE 4.7-6 CONSISTENCY ANALYSIS WITH THE CITY OF SAN MATEO CLIMATE ACTION PLAN**

CF 1. All new development with dedicated offstreet parking: The project includes parking spaces with installed EV chargers or are pre-wired for EV chargers, consistent with state and any local regulations.	<b>Consistent.</b> Future development under the proposed project would be required to be constructed in accordance with current State and City building codes in existence at the time. This includes the CALGreen EV Charging and EV supply equipment requirements for residential and nonresidential development. The City's new reach codes require enhanced EV charging infrastructure for new construction projects above the State requirements.
CF 1. All new development with dedicated offstreet parking: The project includes parking spaces with installed EV chargers that are accessible by members of the public beyond those who live and/or work at the project.	<b>Consistent.</b> Future development under the proposed project would be required to be constructed in accordance with current State and City building codes in existence at the time. This includes the CALGreen EV Charging and EV supply equipment requirements for residential and nonresidential development. The City's new reach codes require enhanced EV charging infrastructure for new construction projects above the State requirements.
ST 6. New developments of at least six multifamily units and/or 10,000 square feet of nonresidential space: Implement TDM strategies to comply with the appropriate trip reduction target identified in applicable area plans and San Mateo Citywide TDM Plan.	<b>Consistent.</b> Future development under the proposed project would be required to be constructed in accordance with current applicable area plans and San Mateo Citywide Transit Demand Management (TDM) plan. This includes the City's Municipal Code Section 27.09.060, <i>Transportation Demand Management</i> , which requires all projects with a net increase of 100 PM peak hours trips to include a trip reduction and parking management plan.
ST 6. Projects of at least 20 multi-family units and/or 50,000 square feet of nonresidential space undergoing additions or alterations (as defined in San Mateo Municipal Code Section 23.06.012): Implement TDM strategies consistent with the targets in relevant area plans and the San Mateo Citywide TDM Plan.	<b>Consistent.</b> Future development under the proposed project would be required to be constructed in accordance with current applicable area plans and San Mateo Citywide Transit Demand Management (TDM) plan. This includes the City's Municipal Code Section 27.09.060, <i>Transportation Demand Management</i> , which requires all projects with a net increase of 100 PM peak hours trips to include a trip reduction and parking management plan.
ST 7. All new development: Be located along El Camino Real, within one-half mile of any Caltrain station, or in the Rail Corridor Transit Oriented Development or Hillsdale Station Area Plan areas.	<b>Consistent.</b> The proposed project includes proposed General Plan policies which would encourage new development in designated Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) throughout the EIR Study Area.
SW 1. All developments with multifamily units or nonresidential space: Provide an area of sufficient space to store and allow access to a compost bin.	<b>Consistent.</b> Future development under the proposed project would be subject to the County's waste requirements and Cal Recycle SB 1383 to reduce statewide disposal of organic waste (including paper, cardboard, yard materials, food scraps, and food-soiled paper).
WW 3. All new development: Include a greywater system.	<b>Consistent.</b> Future development under the proposed project would be required to be constructed in accordance with current State and County water codes in existence at the time. This includes California Water Code, California's Model Water Efficient Landscape Ordinance standards, and the City's Municipal Code Chapter 23.72, <i>Water Conservation in Landscaping</i> , to implement greywater systems.

Source: City of San Mateo, April 2020, San Mateo 2020: Equitable Climate Action Plan, <https://www.cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=>, accessed May 23, 2023.

As identified in Table 4.7-6, the proposed General Plan would be consistent with the strategies in the City's CAP. In addition, the proposed project includes a technical update to the current CAP to update the

## GREENHOUSE GAS EMISSIONS

emissions inventories and forecasts and build on the existing emission reduction strategies to demonstrate the City's consistency with long-term emissions reduction targets established under SB 32 and AB 1279. Moreover, while growth in the City would cumulatively contribute to GHG emissions impacts, the proposed General Plan goals, policies, and actions listed in impact discussion GHG-1 would require local planning and development decisions to consider impacts from emissions and to reduce those emissions.

### CARB Scoping Plan

The CARB Scoping Plan is applicable to State agencies but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require local jurisdictions to adopt its policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the State agencies from the Scoping Plan result in GHG emissions reductions at the local level. So local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the LCFS mandate and changes in the corporate average fuel economy standards.

Development projects under the proposed project would be required to adhere to the programs and regulations identified by the Scoping Plan and implemented by State, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32, SB 32, and AB 1279. Future development projects would be required to comply with these state GHG emissions reduction measures because they are statewide strategies. For example, new buildings under the proposed project would be required to meet the CALGreen and Building Energy Efficiency Standards in effect at the time when applying for building permits. Furthermore, the proposed project includes proposed General Plan goals, policies, and actions (listed in impact discussion GHG-1) and continues the GHG reduction measures in the City's current CAP to minimize GHG emissions and therefore help achieve GHG reduction goals. Implementation of the proposed project would not obstruct implementation of the CARB Scoping Plan, and impacts would be *less than significant*.

### Plan Bay Area

*Plan Bay Area 2050* is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy that identifies the sustainable vision for the Bay Area.<sup>28</sup> In addition to significant transit and roadway performance investments to encourage focused growth, *Plan Bay Area 2050* directs funding to neighborhood active transportation and complete streets projects, climate initiatives, lifeline transportation and access initiatives, safety programs, and PDA planning.

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<sup>28</sup> Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, Plan Bay Area 2050, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed May 24, 2023.

## GREENHOUSE GAS EMISSIONS

The EIR Study Area contains a number of PDAs.<sup>29</sup> As discussed in Chapter 3, *Project Description*, of this Draft EIR, future development in the EIR Study Area is projected to occur primarily in ten General Plan Land Use Study Areas, which include areas where current buildings are aging, vacant, or not maintained and areas where property owners have expressed interest to redevelop. Given that future growth would be concentrated in areas currently served by public services and infrastructure, implementation of the proposed project would require less investment in infrastructure than if development was to occur on “greenfield” sites. Furthermore, the proposed General Plan itself would not introduce a substantial number of unplanned population growth in the EIR Study Area, as described in Chapter 4.13, *Population and Housing*, of this Draft EIR.

Thus, the proposed project would be consistent with the overall goals of *Plan Bay Area 2050* in concentrating new development in locations where there is existing infrastructure and transit. Therefore, the proposed project would not conflict with the land use concept plan in *Plan Bay Area 2050* and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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GHG-3	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative greenhouse gas emission impacts in the area.
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Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under impact discussions GHG-1 and GHG-2 are not project-specific impacts to global warming, but the proposed project’s contribution to this cumulative impact. As discussed under impact discussions GHG-1 and GHG-2, the proposed project does not involve a stationary source and implementation would meet the legislative reduction targets established by SB 32 and AB 1279 and be consistent with applicable plans adopted for the purpose of reducing GHG emissions. Therefore, as described in impact discussions GHG-1 and GHG-2, GHG emissions generated by the proposed project and their contribution to global climate change would not be cumulatively considerable, and cumulative impacts would not be significant. These *less-than-significant* impacts are identified in impact discussions GHG-1 and GHG-2.

**Significance without Mitigation:** Less than significant.

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<sup>29</sup> Metropolitan Transportation Commission, updated July 2020, Priority Development Areas (Plan Bay Area 2050), <https://opendata.mtc.ca.gov/datasets/priority-development-areas-plan-bay-area-2050>, accessed May 24, 2023.

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## HAZARDS AND HAZARDOUS MATERIALS

### 4.8 HAZARDS AND HAZARDOUS MATERIALS

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential hazards and hazardous material impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project. A discussion of wildland fire hazards is provided in Chapter 4.18, *Wildfire*, of this Draft Environmental Impact Report (EIR).

#### 4.8.1 ENVIRONMENTAL SETTING

##### 4.8.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

###### *United States Environmental Protection Agency*

The United States Environmental Protection Agency (USEPA) is the primary federal agency that regulates hazardous materials and waste. In general, the USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress. The agency is responsible for researching and setting national standards for a variety of environmental programs, delegating the responsibility for issuing permits, and monitoring and enforcing compliance to states and Native American tribes. USEPA programs promote handling hazardous waste safely, cleaning up contaminated land, and reducing waste volumes through such strategies as recycling. California falls under the jurisdiction of USEPA Region 9. Under the authority of the Resource Conservation and Recovery Act (RCRA) and in cooperation with State and tribal partners, the USEPA Region 9 Waste Management and Superfund Divisions manage programs for site environmental assessment and cleanup, hazardous and solid waste management, and underground storage tanks.

###### *United States Department of Transportation*

The United States Department of Transportation (DOT) has the regulatory responsibility for the safe transportation of hazardous materials between states and internationally. The DOT regulations govern all means of transportation, except for those packages shipped by mail, which are covered by United States Postal Service regulations. The federal RCRA of 1976 imposes additional standards for the transport of hazardous waste.

###### *Occupational Safety and Health Administration*

The Occupational Safety and Health Administration (OSHA) requires specific training for hazardous materials handlers, provision of information to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets from materials manufacturers. The material safety data sheets describe the risks, as well as proper handling and procedures, related to specific hazardous



## HAZARDS AND HAZARDOUS MATERIALS

materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

### *Resource Conservation and Recovery Act of 1976*

Federal hazardous waste laws are generally promulgated under the RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984. These laws provide for the “cradle to grave” regulation of hazardous waste. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. The Department of Toxic Substances Control (DTSC) is responsible for implementing the RCRA program as well as California’s own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, the California Environmental Protection Agency (CalEPA) has in turn delegated enforcement authority to the San Mateo County Health Department, Environmental Health Services Division for State law regulating hazardous waste producers or generators in San Mateo.<sup>1</sup>

### *Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986*

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act (SARA) amended the CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites; required Superfund actions to consider the standards and requirements found in other State and federal environmental laws and regulations; provided new enforcement authorities and settlement tools; increased State involvement in every phase of the Superfund program; increased the focus on human health problems posed by hazardous waste sites; encouraged greater citizen participation in making decisions on how sites should be cleaned up; and increased the size of the trust fund to \$8.5 billion.

### *Emergency Planning Community Right-to-Know Act*

The Emergency Planning Community Right-to-Know Act (EPCRA), also known as SARA Title III, was enacted in October 1986. This law requires State and local governments to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by USEPA’s Office of Emergency Management. USEPA’s Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention (CalARP) program. Under the CUPA

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<sup>1</sup> San Mateo County Health, 2022, Hazardous Waste Generator Program, <https://www.smchealth.org/hazwaste>, accessed October 3, 2022.

## HAZARDS AND HAZARDOUS MATERIALS

program, the CalEPA has in turn delegated enforcement authority to the San Mateo County Health Department, Environmental Health Division for CalARP.<sup>2</sup>

### *Hazardous Materials Transportation Act*

The DOT regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations. State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). The California State Fire Marshal's Office has oversight authority for hazardous materials liquid pipelines. The California Public Utilities Commission has oversight authority for natural gas pipelines in California. These agencies also govern permitting for hazardous materials transportation.

### *Federal Response Plan*

The Federal Response Plan of 1992 is a signed agreement among 27 federal departments and agencies and other resource providers, including the American Red Cross, that: (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of State and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency. The Federal Response Plan is part of the National Response Framework, which was most recently updated in October 2019.

### *The Stafford Act*

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) of 1988, as amended, authorizes federal government assistance for emergencies and disasters when State and local capabilities are exceeded. The Stafford Act forms the statutory authority for most federal disaster response activities, especially as they relate to the Federal Emergency Management Agency (FEMA) and FEMA programs.

### *National Response Framework*

The National Response Framework, published by the United States Department of Homeland Security and last updated October 2019, is a guide for the nation to respond to all types of disasters and emergencies.<sup>3</sup> This framework describes specific authorities and best practices for managing incidents that range from serious local or large-scale terrorist attacks to catastrophic natural disasters. In addition,

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<sup>2</sup> San Mateo County Health, 2022, Hazardous Waste Generator Program, <https://www.smchealth.org/hazwaste>, accessed October 3, 2022.

<sup>3</sup> United States Department of Homeland Security, October 28, 2019, National Response Framework, [fema.gov/sites/default/files/2020-04/NRF\\_FINALApproved\\_2011028.pdf](https://fema.gov/sites/default/files/2020-04/NRF_FINALApproved_2011028.pdf), accessed October 3, 2022.

## HAZARDS AND HAZARDOUS MATERIALS

the National Response Framework describes the principles, roles, and responsibilities, and coordinating structures for responding to an incident, and further describes how response efforts integrate with those of the other mission areas.

### *Natural Gas Pipeline Safety Act of 1968*

The Natural Gas Pipeline Safety Act of 1968 authorizes the DOT to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration (PHMSA) within the DOT develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. DOT's and PHMSA's regulations governing natural gas transmission pipelines, facility operations, employee activities, and safety are found at Code of Federal Regulations Title 49, Transportation, Parts 190 through 192, Part 195, and Part 199.

### *Pipeline Safety Improvement Act of 2002*

The Pipeline Safety Improvement Act mandates that the DOT, the Department of Energy, and the National Institute of Standards and Technology in the Department of Commerce carry out a program of research, development, demonstration, and standardization to ensure the integrity of pipeline facilities.<sup>4</sup> The purpose of the Research and Design Program is to identify safety and integrity issues and develop methodologies and technologies to characterize, detect, and manage risks associated with natural gas and hazardous liquid pipelines.

### *Pipeline Inspection, Enforcement, and Protection Act of 2006*

The Pipeline Inspection, Enforcement, and Protection Act confirms the commitment to the Integrity Management Program and other programs enacted in the Pipeline Safety Improvement Act of 2002. The 2006 legislation includes provisions on:

- Preventing excavation damage to pipelines through the enhanced use and improved enforcement of State "One-Call" laws that preclude excavators from digging until they contact the State One-Call system to locate the underground pipelines;
- Minimum standards for Integrity Management Programs for distribution pipelines (including installation of excess flow valves on single-family residential service lines based on feasibility and risk);
- Standards for managing gas and hazardous liquid pipelines to reduce risks associated with human factors (e.g., fatigue);
- Authority for the Secretary to waive safety standards in emergencies;
- Authority for the Secretary to assist in restoration of disrupted pipeline operations;

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<sup>4</sup> United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, October 2017, Pipeline Safety Improvement Act of 2002, <https://www.phmsa.dot.gov/pipeline/congressional-mandates/pipeline-safety-improvement-act-2002>, accessed October 3, 2022.

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- Review and update incident reporting requirements;
- Requirements for senior executive officers to certify operator integrity management performance reports; and
- Clarification of jurisdiction between states and PHMSA for short laterals that feed industrial and electric generator consumers from interstate natural gas pipelines.<sup>5</sup>

### *Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011*

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 was designed to examine and improve the state of pipeline safety regulation. This act accomplishes the following:

- Reauthorizes PHMSA's federal pipeline safety programs through fiscal year 2015.
- Provides the regulatory certainty necessary for pipeline owners and operators to plan infrastructure investments and create jobs.
- Improves pipeline transportation by strengthening enforcement of current laws and improving existing laws where necessary.
- Ensures a balanced regulatory approach to improving safety that applies cost-benefit principles.
- Protects and preserves Congressional authority by ensuring certain key rulemakings are not finalized until Congress has an opportunity to act.<sup>6</sup>

## State Regulations

### *California Environmental Protection Agency*

One of the primary State agencies that regulate hazardous materials is CalEPA. CalEPA is authorized by the USEPA to enforce and implement certain federal hazardous materials laws and regulations. The California DTSC, a department of the CalEPA, protects California and Californians from exposure to hazardous waste, primarily under the authority of the RCRA and the California Health and Safety Code.<sup>7</sup> The DTSC requirements include the need for written programs and response plans, such as Hazardous Materials Management Plans. The DTSC programs include dealing with aftermath clean-ups of improper hazardous waste management, evaluation of samples taken from sites, enforcement of regulations regarding use, storage, and disposal of hazardous materials, and encouragement of pollution prevention.

### *California Division of Occupational Safety and Health*

Like OSHA at the federal level, the California Division of Occupational Safety and Health (CalOSHA) is the responsible State-level agency for ensuring workplace safety. CalOSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. In the

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<sup>5</sup> Interstate Natural Gas Association of America, 2022, The Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, <https://www.ingaa.org/Pipelines101/143/861/851.aspx>, accessed October 3, 2022.

<sup>6</sup> United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration, January 2020, Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, <https://www.phmsa.dot.gov/legislative-mandates/pipeline-safety-act/pipeline-safety-regulatory-certainty-and-job-creation-act>, accessed October 3, 2022.

<sup>7</sup> Hazardous Substance Account, Chapter 6.5 (Section 25100 et seq.) of the Hazardous Waste Control Law, Chapter 6.8 (Section 25300 et seq.) of the Health and Safety Code.

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event that a work site is contaminated, a Site Safety Plan must be crafted and implemented to protect the safety of workers. Site Safety Plans establish policies, practices, and procedures to prevent the exposure of workers and members of the public to hazardous materials originating from the contaminated site or building.

### *California Office of Emergency Services*

The California Office of Emergency Services (Cal OES) was established as part of the Governor's Office on January 1, 2009. It was created pursuant to Assembly Bill 38, which merged the duties, powers, purposes, and responsibilities of the former Governor's Emergency Management Agency with those of the Governor's Office of Homeland Security. Cal OES is responsible for the coordination of overall State agency response to major disasters in support of local government. The agency is responsible for ensuring the State's readiness to respond to and recover from all hazards—natural, humanmade, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

### *California Department of Transportation and California Highway Patrol*

Caltrans and the CHP are the two State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies. Caltrans manages more than 50,000 miles of California's highways and freeways, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on highways, freeways, and intercity rail lines.

The CHP enforces hazardous materials and hazardous waste labeling and packing regulations designed to prevent leakage and spills of materials in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the State.

Common carriers are licensed by the CHP, pursuant to Section 32000 of the California Vehicle Code. This section requires licensing every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of the business in the delivery of hazardous materials.

### *California Building Code*

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations (CCR), commonly referred to as the "California Building Code" (CBC). The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The City of San Mateo regularly adopts each new CBC update under the San Mateo Municipal Code (SMMC) Chapter 23.08, *Building Code*. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the

## HAZARDS AND HAZARDOUS MATERIALS

typical fire safety requirements of the CBC, including the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors and building materials; and the clearance of debris and vegetation near occupied structures in wildfire hazard areas.

### *California Health and Safety Code*

California Health and Safety Code Chapter 6.95 and California Code of Regulations Title 19, Section 2729, set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on site. A business that uses hazardous materials or a mixture containing hazardous materials must establish and implement a management plan if the hazardous material is handled in certain quantities.

### *Senate Bill 379*

Senate Bill 379, approved October 8, 2015, requires all cities and counties to include climate adaptation and resiliency strategies in the safety elements of their general plans upon the next revision beginning January 1, 2017. The bill requires the climate adaptation update to include a set of goals, policies, and objectives for their communities based on the vulnerability assessment, as well as implementation measures, including the conservation and implementation of natural infrastructure that may be used in adaptation projects. Specifically, the bill requires that upon the next revision of a general plan or local hazard mitigation plan (LHMP), the safety element is to be updated as necessary to address climate adaptation and resiliency strategies applicable to the city or county.

## Regional Regulations

### *San Francisco Bay Regional Water Quality Control Board*

The Porter-Cologne Water Quality Control Act established the State Water Resources Control Board (SWRCB) and divided the State into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB). The San Francisco Bay RWQCB, Region 2, regulates water quality in the EIR Study Area. The San Francisco Bay RWQCB has the authority to require groundwater investigations and/or remedial action if the quality of groundwater or surface waters of the State are threatened.

### *Bay Area Air Quality Management District*

The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products. The latter are typically the responsibility of CalEPA and the California Air Resources Board. The BAAQMD is responsible for preparation of attainment plans for non-attainment criteria pollutants, control of stationary air pollutant sources, and issuance of permits for activities, including demolition and renovation activities affecting asbestos-containing materials (District Regulation 11, Rule 2) and lead (District Regulation 11, Rule 1).



## HAZARDS AND HAZARDOUS MATERIALS

### *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan*

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan* (MJHMP), updated in 2021 in accordance with the federal Disaster Mitigation Action of 2000 (DMA 2000), provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term risk to people and property from these hazards. The San Mateo Jurisdictional Annex of the MJHMP provides an assessment of hazards and vulnerabilities, and a set of mitigation actions for San Mateo specifically while considering the results from the countywide effort. In the context of an MJHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including hazardous materials release and wildfire. Mitigation actions related to hazards in the San Mateo Jurisdictional Annex of the MJHMP include adopting the most recent California Building Standards Code, conducting annual inspections of businesses and multi-family dwellings for fire safety requirements, and adopting best practices for evacuation planning.

The MJHMP must be reviewed and approved by the Federal Emergency Management Agency (FEMA) every five years to maintain eligibility for disaster relief funding. As part of this process, the California Governor's Office of Emergency Services reviews all local hazard mitigation plans in accordance with DMA 2000 regulations and coordinates with local jurisdictions to ensure compliance with FEMA's Local Mitigation Plan Review Guide. As part of the proposed project, the MJHMP is adopted in its entirety into the proposed Safety Element by reference.

### *Airport Land Use Compatibility Plan*

The Airport Land Use Compatibility Plan (ALUCP) covering all three public airports in San Mateo County was approved by the City/County Association of Governments of San Mateo County (C/CAG) in December 1996. The C/CAG is the Airport Land Use Commission (ALUC) responsible for promoting land use compatibility around the County's airports in order to minimize public exposure to excessive noise and safety hazards. The C/CAG has since adopted updated ALUCPs for San Francisco International Airport (November 2012), Half Moon Bay Airport (September 2014), and San Carlos Airport (October 2015).<sup>8</sup> The updated ALUCPs describe a series of land use safety and compatibility zones and associated guidelines for development around each airport that are intended to prevent development that is incompatible with airport operations. These regulations include height restrictions based on proximity to the airport and flight patterns. The ALUCPs delineate two Airport Influence Areas (AIA), Area A and Area B, within proximity to each airport. As a requirement for development located in Area A, the presence of existing airports within two miles of the property must be disclosed in the notice of intention to offer the property for sale. For development located within Area B of the AIA, the C/CAG Board shall exercise its statutory duty to review proposed land development proposals, among other plans, ordinances, amendments, and actions.

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<sup>8</sup> City/County Association of Governments of San Mateo County, 2023, Airport Land Use, <https://ccag.ca.gov/plansreportslibrary-2/airport-land-use/>, accessed May 29, 2023.

## HAZARDS AND HAZARDOUS MATERIALS

### *Certified Unified Program Agency*

A CUPA is an agency of a county or city that administers several State programs regulating hazardous materials and hazardous waste. San Mateo County Environmental Health Division is the CUPA for the City of San Mateo. SMCEH administers the programs described below.

### *Hazardous Materials Business Plan Program*

The Business Plan must include a summary of business activities; owner/operator information including emergency contacts; the type and quantity of reportable hazardous materials; a site map; emergency response procedures; and an employee training program.

In general, Business Plans are required for businesses handling and/or storing a hazardous material in quantities at or above the following thresholds: 55 gallons for liquids, 500 pounds for solids and 200 cubic feet (at standard temperature and pressure) for compressed gases.<sup>9</sup>

### *The California Accidental Release Prevention Program*

The California Accidental Release Prevention Program (CalARP) protects people from the release of “regulated substances” into the environment. Regulated substances are chemicals that pose a major threat to public health and safety or the environment because they are highly toxic, flammable or explosive; such substances include ammonia, chlorine gas, hydrogen, nitric acid, and propane.

Businesses subject to CalARP must develop a Risk Management Plan (RMP) for handling an accidental release; the RMP ensures that businesses have the proper information to give emergency response teams if an accidental release occurs. RMPs describe impacts to public health and the environment if a regulated substance is released near schools, residential areas, hospitals, and childcare facilities. RMPs must include procedures for: keeping employees and customers safe; handling regulated substances; training staff; maintaining equipment; safe storage of substances; and responding to an accidental release.<sup>10</sup>

### *Underground Storage Tank Program*

The CUPA staff review plans for new underground storage tanks (USTs); inspect UST sites during several construction phases to ensure installation standards are met; and conduct annual inspections to verify that operating requirements are met. All tank owners must possess a valid operating permit; conduct routine testing; maintain equipment; prepare an approved leak-response plan; and upgrade tank systems, as required.<sup>11</sup>

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<sup>9</sup> San Mateo County Health, 2023, Hazardous Material Business Plan Program, <https://www.smchealth.org/hmbp>, accessed May 29, 2023.

<sup>10</sup> San Mateo County Health, 2023, The California Accidental Release Prevention Program (CalARP), <https://www.smchealth.org/cupa/calarp>, accessed May 29, 2023.

<sup>11</sup> San Mateo County Health, 2023, Underground Storage Tank Program, <https://www.smchealth.org/cupa/ust>, accessed May 29, 2023.

## HAZARDS AND HAZARDOUS MATERIALS

### Local Regulations

#### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to hazards and hazardous materials are primarily in the Safety Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.8.3, *Impact Discussion*.

#### *San Mateo Consolidated Fire Department*

June 2019 the San Mateo, Belmont, and Foster City Fire Departments joined together as a Joint Powers Authority and formed the San Mateo Consolidated Fire Department (SMC Fire). SMC Fire manages and maintains emergency plans and training of City staff and community members. The department has 10 engines and two trucks operating out of nine fire stations, six of which are located within the EIR Study Area. SMC Fire department maintains five divisions, including administration, fire prevention, training, emergency preparedness, fire operations, and EMS with approximately 154 full-time employees working in one of these divisions.<sup>12</sup> Fire hazard risk in the City of San Mateo is further discussed in Chapter 4.18, *Wildfire*, of this Draft EIR.

SMC Fire's Fire Prevention division is responsible for enforcing all applicable State and local fire codes and standards. This includes plan review and code consultation before any construction occurs. The Bureau of Fire Protection is also responsible for insuring the maintenance of vegetation and defensible space within these areas. They conduct spot inspections and enforcement in the wildland urban interface areas and oversee vegetation management programs at the beginning of every fire season.

#### *City of San Mateo Municipal Code*

The SMMC includes various directives pertaining to hazards and hazardous materials. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to hazards and hazardous materials impacts are included in Title 7, *Health, Sanitation, and Public Nuisances*, Title 23, *Building and Construction*, and Title 27, *Zoning*.

- Section 7.16.030, *Public Nuisances Adversely Affecting the Public Peace and Safety*, declares storage, leakage, release, or use of any explosive, flammable liquid, or other dangerous, toxic, or hazardous substance in any manner or in any amount other than as permitted pursuant to SMMC and County, State, or federal laws as a public nuisance adversely affecting the public peace and safety.
- Chapter 23.08, *Building Code*, adopts the 2022 CBC as the rules, regulations, and standards within the City as to all matters except as modified or amended in the SMMC.

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<sup>12</sup> City of San Mateo, 2023, *Fire Department: San Mateo Consolidated Fire Department*. <https://www.cityofsanmateo.org/74/Fire>, accessed March 1, 2023.

## HAZARDS AND HAZARDOUS MATERIALS

- Chapter 23.28, *Fire Code*, adopts the 2016 edition of the California Fire Code as the rules, regulations, and standards within the City as to all matters except as modified or amended in the SMMC. As stated in Section 27.56.150, *Fire and Explosive Hazards*, fire and explosive hazards are subject of the fire prevention regulations in Chapter 23.28 of the SMMC.
- Chapter 27.73, *TC District – Transportation Corridor Sections*, establishes the Transportation Corridor (TC) district to maintain adequate public transportation corridors to accommodate highway and rail transit at US 101, SR 92, and the rail line. It is intended to protect these corridors from encroaching development which might interfere with the transportation use or create a hazardous condition.
- Chapter 27.77, *Design Review Standards for Service Stations*, is intended to ensure all service stations in the city are constructed and operated in an appropriate manner. Section 27.77.030, *Accessory Uses and Merchandising*, requires all hazardous and toxic waste to be disposed of in accordance with County of San Mateo Health Department regulations.

### 4.8.1.2 EXISTING CONDITIONS

#### Schools

As previously described in Chapter 4.2, *Air Quality*, of this Draft EIR, some land uses are considered more sensitive to airborne hazardous materials than others due to the types of population groups or activities involved. Because sensitive population groups include children, the California Environmental Quality Act (CEQA) requires an evaluation of hazardous emissions or handling hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school, private or public.

The City of San Mateo is served by two public school districts: the San Mateo-Foster City School District (SMFCSD) and the San Mateo Union High School District (SMUHSD). The SMFCSD educates students through 19 schools in the EIR Study Area. The SMUHSD serves the City of San Mateo through three high schools, a Middle College program in conjunction with the College of San Mateo, an alternative/continuation high school, and an Adult School Program.

#### Hazardous Materials Sites

California Government Code Section 65962.5 requires the CalEPA to compile, maintain, and update specified lists of hazardous material release sites. CEQA (California Public Resources Code Section 21092.6) requires the lead agency to consult the lists compiled pursuant to Government Code Section 65962.5 to determine whether the project and any alternatives are identified on any of the following lists:

- **USEPA NPL.** The USEPA's National Priorities List (NPL) includes all sites under the USEPA's Superfund program, which was established to fund cleanup of contaminated sites that pose risks to human health and the environment.
- **USEPA CERCLIS and Archived Sites.** The USEPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) includes a list of 15,000 sites nationally identified as hazardous sites. This would also involve a review for archived sites that have been removed from CERCLIS due to No Further Remedial Action Planned status.

## HAZARDS AND HAZARDOUS MATERIALS

- **USEPA RCRIS (RCRA Info).** The Resource Conservation and Recovery Act Information System (RCRIS or RCRA Info) is a national inventory system about hazardous waste handlers. Generators, transporters, handlers, and disposers of hazardous waste are required to provide information for this database.
- **DTSC Cortese List.** The DTSC maintains the Hazardous Waste and Substances Sites (Cortese) list as a planning document for use by the State and local agencies to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. This list includes the Site Mitigation and Brownfields Reuse Program Database.
- **DTSC HazNet.** The DTSC uses this database to track hazardous waste shipments.
- **SWRCB LUSTIS.** Through the Leaking Underground Storage Tank Information System, the SWRCB maintains an inventory of Underground Storage Tanks (USTs) and leaking USTs (LUST), which tracks unauthorized releases.

The required lists of hazardous material release sites are commonly referred to as the “Cortese List,” named after the legislator who authored the legislation. Because the statute was enacted more than 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information required in the Cortese List does not exist. Those requesting a copy of the Cortese Lists are now referred directly to the appropriate information resources contained on websites hosted by the boards or departments referenced in the statute, including DTSC’s online EnviroStor database and the SWRCB’s online GeoTracker database. These two databases include hazardous material release sites, along with other categories of sites or facilities specific to each agency’s jurisdiction.

A search of the online EnviroStor and GeoTracker databases on October 3, 2022 identified 245 hazardous materials sites within the EIR Study Area.<sup>13, 14</sup> Of the 245 sites, 41 are designated as active and the remaining 204 sites are designated as “closed” or “completed – case closed.” The full list of the 245 hazardous materials site within the EIR Study Area is included as Appendix F, *Hazardous Materials Sites*, of this Draft EIR. The 41 active hazardous materials sites are shown in Table 4.8-1, *Active Hazardous Material Sites in the EIR Study Area*. The majority of the 41 listed sites are classified as clean-up program sites, where recent or historical unauthorized releases of pollutants to the environment, including soil, groundwater, surface water, and sediment, have occurred. Many of these sites are existing or former dry cleaners, gas stations, plant nurseries, or light industrial uses typical of urban and suburban communities in the Bay Area.

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<sup>13</sup> Department of Toxic Substances Control, 2022, EnviroStor, <https://www.envirostor.dtsc.ca.gov/public/>, accessed October 3, 2022.

<sup>14</sup> State Water Resources Control Board, 2022, GeoTracker, <https://geotracker.waterboards.ca.gov/>, accessed October 3, 2022.

## HAZARDS AND HAZARDOUS MATERIALS

**TABLE 4.8-1 ACTIVE HAZARDOUS MATERIAL SITES IN THE EIR STUDY AREA**

Map ID	Site Name	Address	Site Type	Cleanup Status
<b>EnviroStor Sites</b>				
1	704 North San Mateo Drive	704 North San Mateo Drive	State Response	Active
2	Blue Bird Cleaners	56 and 60 West 42nd Avenue	Voluntary Cleanup	Active
3	Downtown San Mateo Opportunity Sites	400 East 5th Avenue, 480 East 4th Avenue	Voluntary Cleanup	Active
4	Former Carl's Cleaners	801 South B Street	Voluntary Cleanup	Active
5	New North Central Elementary School	715 Indian Avenue	School Investigation	Active
6	Village Cleaners	32 37th Avenue	Voluntary Cleanup	Active
<b>GeoTracker Sites</b>				
7	704 North San Mateo Drive	704 North San Mateo Drive	Cleanup Program Site	Open – Site Assessment
8	911 North Amphlett	911 North Amphlett Boulevard	Cleanup Program Site	Open – Site Assessment
9	922-980 South Claremont	922-980 South Claremont Street	Cleanup Program Site	Open – Long Term Management
10	ARCO #313-D	1643 El Camino Real	LUST Cleanup Site	Open – Eligible for Closure
11	Bella Mangiata Restaurant	233 Baldwin Avenue	LUST Cleanup Site	Open – Assessment & Interim Remedial Action
12	Blu-White Laundry	80 North B Street	Cleanup Program Site	Open – Remediation
13	Blue Bird Cleaners	60 West 42nd Street	Cleanup Program Site	Open – Assessment & Interim Remedial Action
14	Borel Square Cleaners	67 Bovet Road	Cleanup Program Site	Open – Verification Monitoring – Land Use Restrictions
15	Carl's Dry Cleaners	801 South B Street	Cleanup Program Site	Open – Site Assessment
16	Chevron 9-7863	2009 South El Camino Real	LUST Cleanup Site	Open – Verification Monitoring
17	Cray Cleaners	33 West 37th Avenue	Cleanup Program Site	Open – Site Assessment
18	Firestone	2180 South El Camino Real	Cleanup Program Site	Open – Eligible for Closure
19	Former Bayshore Equipment Rental	909 North Amphlett Boulevard	Cleanup Program Site	Open – Assessment & Interim Remedial Action
20	Giotinis Property	1218 Monte Diablo Avenue	Cleanup Program Site	Open – Site Assessment
21	Golden Gate Flower Growers	1000 South Amphlett Boulevard	LUST Cleanup Site	Open – Assessment & Interim Remedial Action



## HAZARDS AND HAZARDOUS MATERIALS

**TABLE 4.8-1 ACTIVE HAZARDOUS MATERIAL SITES IN THE EIR STUDY AREA**

Map ID	Site Name	Address	Site Type	Cleanup Status
22	Hayward Park Caltrain Station	401 Concar Drive	Cleanup Program Site	Open – Site Assessment
23	Hillsdale-Norge Cleaners, Former	3723 South El Camino Real	Cleanup Program Site	Open – Site Assessment
24	J and C One Hour Cleaners	111 West 25th Avenue	Cleanup Program Site	Open – Site Assessment
25	Kentucky Fried Chicken #245	406 East Third Avenue	LUST Cleanup Site	Open – Eligible for Closure
26	Louie's Cleaners	8 17th Avenue	Cleanup Program Site	Open – Site Assessment
27	Major Cleaners (Former)	144 West 25th Avenue	Cleanup Program Site	Open – Site Assessment
28	Marina Shopping Center	2978 South Norfolk Street	Cleanup Program Site	Open – Site Assessment
29	Nouveau Cleaners, Former	11 West 37th Avenue	Cleanup Program Site	Open – Site Assessment
30	Parkside Plaza Cleaners	1870 South Norfolk Street	Cleanup Program Site	Open – Verification Monitoring
31	Private Residence	Private Residence	LUST Cleanup Site	Open – Site Assessment
32	Puri Property	20 North Railroad Avenue	Cleanup Program Site	Open – Site Assessment
33	Samaritan House	1515 South Claremont Street	Cleanup Program Site	Open – Verification Monitoring
34	San Mateo Cleaners	224 East Hillsdale Boulevard	Cleanup Program Site	Open – Assessment & Interim Remedial Action
35	San Mateo Renters	1414 East 3rd Avenue	LUST Cleanup Site	Open – Eligible for Closure
36	Signal Oil Station, Former	2717 South El Camino Real	Cleanup Program Site	Open – Site Assessment
37	Sunrise Cleaners	235 Baldwin Avenue	Cleanup Program Site	Open – Remediation
38	Unocal Station #3294	1626 South El Camino Real	LUST Cleanup Site	Open – Remediation
39	Village Cleaners, Former	32 37th Avenue	Cleanup Program Site	Open – Site Assessment
40	Wardrobe Cleaners	333 and 335 East 4th Avenue	Cleanup Program Site	Open – Site Assessment
41	Wherehouse Entertainment	1934 South El Camino Real	LUST Cleanup Site	Open – Site Assessment

Note: LUST = Leaking Underground Storage Tank

Source: Department of Toxic Substances Control, 2022, EnviroStor, <https://www.envirostor.dtsc.ca.gov/public/>, accessed October 3, 2022; State Water Resources Control Board, 2022, GeoTracker, <https://geotracker.waterboards.ca.gov/>, accessed October 3, 2022.

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### Airport Hazards

There are no public or private airports within the city.<sup>15</sup> However, the EIR Study Area is located within the San Carlos Airport and San Francisco International Airport AIAs. San Carlos Airport is located 1.6 miles southeast of the City Limits. The entirety of the city is within AIA Area A of San Carlos Airport, but is not within the boundaries of AIA Area B. San Francisco International Airport is located 2 miles northeast of city limits. The entirety of the city is within AIA Area A of San Francisco Airport. A small northwestern portion of the city is within the boundaries of AIA Area B of San Francisco Airport. Figure 4.8-1, *Airport Influence Areas*, depicts the boundaries of AIA Areas A and B of both airports.

### Emergency Response and Evacuation Planning Areas

As described in Section 4.8.1.1, *Regulatory Framework*, the EIR Study Area is within the planning areas of the San Mateo County Operational Area EOP and the San Mateo LHMP. The SMC Fire Office of Emergency Services and the San Mateo Police Department are responsible for coordinating emergency services in the city. SMC Fire manages and maintains emergency plans and training of City staff and community members. The Fire Chief and City Managers are responsible for the operation of the City's Emergency Operations Center, and coordinate planning, training, and preparation for response to major emergencies and natural disasters.<sup>16</sup> When evacuations are necessary, SMC Fire decides when and where an evacuation will be made, and the San Mateo Police Department helps carry out the evacuation event.<sup>17</sup>

## 4.8.2 STANDARDS OF SIGNIFICANCE

Impacts related to wildland fires are fully discussed in Chapter 4.18, *Wildfire*, of this Draft EIR. Therefore, the following standard is not discussed in this chapter.

- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

The proposed project would result in a significant hazards and hazardous materials impact if it would:

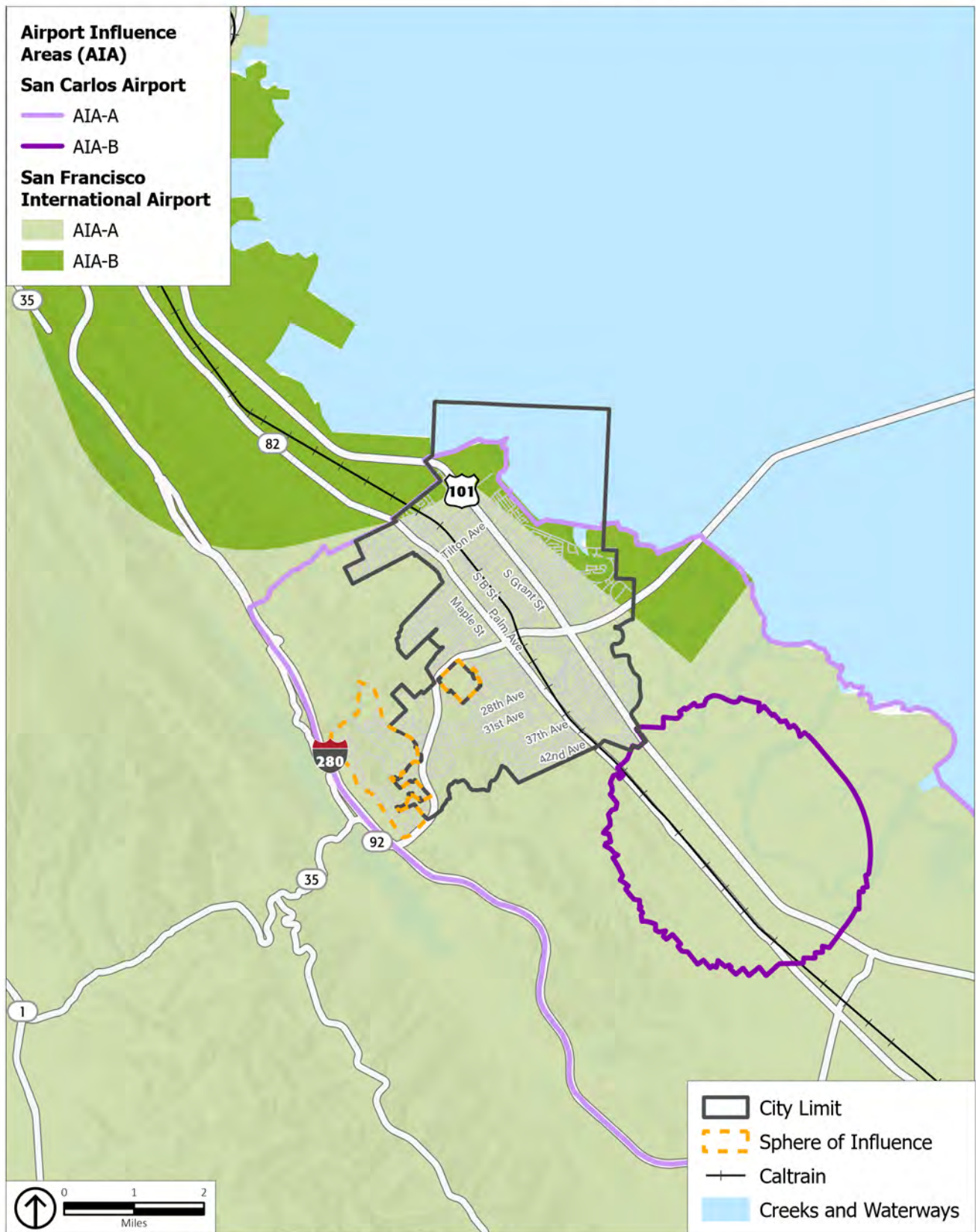
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

<sup>15</sup> AirNav.com, 2022, Airports, <https://www.airnav.com/>, accessed October 3, 2022.

<sup>16</sup> San Mateo Consolidated Fire Department, 2022, Office of Emergency Services, <https://www.smcfire.org/divisions/community-risk-reduction/office-of-emergency-services/>, accessed August 8, 2022.

<sup>17</sup> J. Yoke (SMC Fire Emergency Services Manager), communications to PlaceWorks, SMC Fire Office of Emergency Services, May 25, 2023.

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Source: County of San Mateo, 2022; PlaceWorks, 2023.

Figure 4.8-1  
Airport Influence Areas

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4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. In combination with past, present, and reasonably foreseeable projects, result in cumulative hazards and hazardous materials impacts in the area.

### 4.8.3 IMPACT DISCUSSION

HAZ-1	The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
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Table 4.8-1, *Active Hazardous Material Sites in the EIR Study Area*, indicates which hazardous sites in the EIR Study Area are still open and/or active.

Implementation of the proposed project involves the designation of land uses that include commercial, research and development, and residential land uses in San Mateo, as well as continued redevelopment and infill development under the proposed project. Development associated with the project would increase the number of businesses and residents in the EIR Study Area, thereby increasing the amount of hazardous materials being transported, stored, and manufactured, and the number of people exposed to these materials. Development under the proposed project would result in an increase in the frequency of transport, use, and disposal of hazardous materials associated with commercial and industrial growth in San Mateo. Though businesses and users are required by federal, State, and local regulations to properly transport, use, and dispose of hazardous material, it is possible that upset or accidental conditions may arise that result in the release of hazardous materials into the environment.

The proposed Safety (S) Element contains goals, policies, and actions that require local planning and development decisions to consider impacts that contribute to the risk of loss, injury, or death as a result of hazardous materials releases. The following General Plan goals, policies, and programs would serve to minimize potential adverse impacts from hazardous materials:

- **Goal S-1:** Minimize potential damage to life, environment, and property through timely, well-prepared, and well-coordinated emergency preparedness, response plans, and programs.
  - **Policy S 1.1: Emergency Readiness.** Maintain the City's emergency readiness and response capabilities, especially regarding hazardous materials spills, natural gas pipeline ruptures, fire hazards, wildland fire risk, earthquakes, pandemics, and flooding. Focus primarily on areas identified by the City as underserved and most vulnerable to loss of life and property due to

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proximity to hazardous incidences, and work to ensure funding is available to these communities as a key component of emergency readiness.

- **Policy S 1.2: Local Hazard Mitigation Plan.** Incorporate by reference the San Mateo County Multi-jurisdictional Local Hazard Mitigation Plan, approved by the Federal Emergency Management Agency (FEMA) in 2021, along with any future updates or amendments, into this Safety Element in accordance with Government Code Section 65302.6.
- **Policy S 1.3: Location of Critical Facilities.** Avoid locating critical facilities, such as hospitals, schools, fire, police, emergency service facilities, and other utility infrastructure, in areas subject to slope failure, wildland fire, flooding, sea level rise, and other hazards, to the extent feasible.
- **Policy S 1.6: Emergency Infrastructure and Equipment.** Maintain and fund the City's emergency operations center in a full functional state of readiness. Designate a back-up Emergency Operations Center with communications redundancies.
- **Goal S-6: Protect the community's health, safety, and welfare relating to the use, storage, transport, and disposal of hazardous materials.**
  - **Policy S 6.1: County Cooperation.** Cooperate with the County of San Mateo and San Mateo Consolidated Fire Department in the regulation and transportation of hazardous materials in San Mateo. Share hazardous materials management enforcement with San Mateo County and San Mateo Consolidated Fire Department.
  - **Policy S 6.2: County Hazardous Waste Management Plan.** Adopt the San Mateo County Hazardous Waste Management Plan by reference into the Safety Element. Make amendments, as necessary, to suit local needs and issues.
  - **Policy S 6.3: Transportation Routes.** Restrict the transportation of hazardous materials and waste to designated truck routes and limit such transportation to non-commute hours.
  - **Policy S 6.4: Hazardous Waste Management Facilities Location.** Regulate the location and operation of new hazardous waste management facilities.
  - **Policy S 6.5: Design of Hazardous Waste Management Facilities.** Require the following features and mitigation measures in the design of proposed hazardous waste management facilities, including life sciences buildings, to minimize potential health, safety, and aesthetic impacts on surrounding properties and occupants:
    - For sites in areas subject to flooding or inundation as shown on Figures S-5 and S-6 [of the proposed General Plan], require facilities to have a surface elevation at least 1.5 feet above the maximum flood water level for areas containing hazardous substances or to be flood-proofed in some other manner suitable to the City.
    - Require facilities to provide for full on-site containment of maximum permitted quantities of hazardous substances, including protection of storm drain or sanitary sewer inlets from accidental entry of hazardous materials.
    - Require facilities to provide separate storage and/or treatment of potentially reactive substances, including separate spill containment vessels. Require that storage of hazardous

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gases provides adequate filtration and neutralization devices to prohibit accidental release of toxic substances.

- Require that all storage and treatment occur within an enclosed structure.
- Require new facilities be sited as far away as possible within the project site from sensitive communities, such as homes, schools, playgrounds, sports fields, childcare centers, senior centers, and long-term healthcare facilities.
- **Policy S 6.6: Risk Assessment.** Require applications for hazardous waste management facilities to prepare a risk assessment to determine site suitability. Establish risk criteria such as distance from public facilities, residential, or immobile population and recreation areas; impacts from natural hazards (seismic, geologic, flood, and fire hazards); impacts on wetlands, endangered species, air quality, and emergency response capabilities; and proximity to major transport routes.
- **Policy S 6.7: Contaminated Sites.** Require the cleanup of contaminated sites, including those indicated on the Hazardous Waste and Substances Sites List (Cortese List) published by the Department of Toxic Substances Control and/or other agencies, such as the San Mateo County Health Department and the Regional Water Quality Control Board, in conjunction with substantial site development or redevelopment, where feasible.
- **Policy S 6.8: Cost Recovery.** Require San Mateo County businesses that generate hazardous waste or applicants for hazardous waste management facilities to pay necessary costs for implementation of Hazardous Waste Management Plans and for application costs, and to pay for costs associated with emergency response services in the event of a hazardous material release, to the extent permitted by law.
- **Action S 6.9: Shared Data.** Regularly coordinate with San Mateo County to collect data on businesses that store hazardous substances to share with local emergency service providers, including the Police Department and San Mateo Consolidated Fire Department, as well as the Public Works Department for the wastewater source-control program.

Implementation of the above goals, policies, and actions, as well as compliance with State, regional, and local regulations would regulate the handling of hazardous substances to reduce potential releases; exposure; and risks of transporting, storing, treating, and disposing of hazardous materials and waste and would ensure that future development under the proposed project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death. Therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

HAZ-2	The proposed project 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.
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A number of pipelines and electrical lines run through the EIR Study Area. The National Pipeline Mapping System (NPMS) shows PG&E Gas Transmission pipelines running through the City of San Mateo and the surrounding area. The pipelines running throughout the city are monitored by pipeline operators who are responsible for the upkeep of pipelines and the authorization of excavations around pipeline locations. Development under the proposed project would increase the exposure of people and the environment to potential hazards related to pipeline or electrical line rupture. As with all development in California, development in San Mateo would be required to follow the procedural requirements of the Underground Service Alert of Northern California, or USA North 811.

The City of San Mateo has approximately 41 facilities or sites that generate, transport, treat, store, and/or dispose of hazardous waste, as recorded by the national RCRA Envirofacts Database. An increase in the transport of hazardous waste from an increased demand for transport, use, and disposal within or outside the EIR Study Area could result in more accidents leading to the release of hazardous materials. An increase in the transport of hazardous materials as a result of future development and activities under the proposed project would be largely concentrated in existing urbanized areas, where commercial, research and development, life science and other similar uses would be concentrated. Some transport of hazardous materials may occur in and around small commercial pockets throughout various areas of the EIR Study Area.

Furthermore, demolition activities during construction projects have the potential to expose construction workers and/or the public to asbestos-containing materials or lead-based paints. Demolition would be required to comply with applicable regulations, including, but not limited to: Bay Area Air Quality Management District's Regulation 11, Rule 2; California Health and Safety Code (Section 39650 et seq.); California Code of Regulations (Title 8, Section 1529); California Occupational Safety and Health Administration regulations (California Code of Regulations, Title 8, Section 1529 [Asbestos] and Section 1532.1 [Lead]); and Code of Federal Regulations (Title 40, Part 61 [asbestos], Title 40, Part 763 [asbestos], and Title 29, Part 1926 [asbestos and lead]).

Separate and independent of the CEQA process, federal and State laws and regulations require measures to reduce human exposure to hazardous materials. For known or potential contaminated sites, prior to issuing a grading or building permit, the City would require an assessment of potential hazards. If the development project could pose a human health or environmental risk, the City would require that such hazards be managed appropriately. Management techniques could include, but would not be limited to, actions such as removal of the contaminants (remediation), site controls to reduce exposure (e.g., capping soils, installation of soil vapor barriers), or administrative mechanisms (deed restrictions). Furthermore, requirements for site locations where hazardous waste is stored are bolstered by various goals, policies, and actions of the proposed General Plan, as listed in impact discussion HAZ-1. Compliance with existing regulations and adherence to proposed General Plan goals, policies, and actions would ensure that impacts from the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## HAZARDS AND HAZARDOUS MATERIALS

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<b>HAZ-3</b>	<b>The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.</b>
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All businesses within the EIR Study Area that handle and/or store a hazardous material equal to or greater than the minimum reportable quantities (i.e., 55 gallons for liquids, 500 pounds for solids and 200 cubic feet (at standard temperature and pressure) for compressed gases) must file a hazardous materials business plan with the CUPA. As described under impact discussions HAZ-1 and HAZ-2, while some future development under the proposed project could be reasonably expected to handle hazardous materials or generate hazardous emissions, the storage, use, and handling of these materials would be subject to existing federal, State, and local regulations.

Compliance with existing plans requirements regarding ongoing environmental review and management of hazardous materials would ensure that future development under the proposed project would not result in a significant impact to adjacent land uses that may contain sensitive receptors. Therefore, the potential for emission of hazardous materials within 0.25 miles of a school during construction and operation of future development would be considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>HAZ-4</b>	<b>The proposed project would include land uses located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 but would not create a significant hazard to the public or the environment.</b>
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Although the EIR Study Area includes sites listed on hazardous materials sites, as described in Section 4.8.1.2, *Existing Conditions*, the listings document the presence of hazardous materials on those sites but do not always document hazardous releases. Redevelopment of these sites under the proposed project could potentially expose future residents and workers to hazards from known hazardous materials releases on and near the sites.

Site assessments for hazardous materials and remediation of hazardous materials releases would be required for redevelopment projects on sites containing known or potential hazardous materials. Development projects would be conducted in accordance with the proposed General Plan and the regulations and policies of the agency assigned to the site (i.e., DTSC, Water Quality Control Board, CUPA, EPA). Furthermore, requirements for hazardous materials sites are bolstered by various goals, policies, and actions of the proposed General Plan, as listed in impact discussion HAZ-1. Compliance with existing regulations and adherence to proposed General Plan goals, policies, and actions would ensure that impacts from the proposed project would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## HAZARDS AND HAZARDOUS MATERIALS

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HAZ-5	The proposed project, portions of which are located within an airport land use plan, would not result in a safety hazard or excessive noise for people residing or working in the project area.
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Airport safety hazards include hazards posed to aircraft as well as hazards posed by aircraft to people and property on the ground. With proper land use planning, aircraft safety risks can be reduced, primarily by avoiding incompatible land uses. Pursuant to Section 21096 of the Public Resources Code, the lead agency must consider whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area. The Federal Aviation Administration and Caltrans Division of Aeronautics provide guidance for land use safety near airports. With adherence to these guidelines, high concentrations of people are not exposed to potential airplane accidents along runways or near airports while airplanes are departing and arriving. There are also guidelines on the placement of housing, schools, and other sensitive land uses near airports because of the noise pollution caused by airplanes (see also Chapter 4.11, *Noise*, of this Draft EIR).

### San Carlos Airport

The San Carlos Airport is County-owned general aviation airport that predominately acts a recreational airport.<sup>18</sup> The entirety of the city is within AIA Area A of San Carlos Airport, but is not within the boundaries of AIA Area B. There are no expansion plans for the airport and only lower elevation buildings surround it and would continue to surround it under the proposed project. Therefore, the project would not exacerbate the potential for hazards in the vicinity of the San Carlos Airport, and the impact would be *less than significant*.

### San Francisco International Airport

The San Francisco International Airport has the capacity to provide regional air traffic for domestic and international commercial and cargo service, and the necessary support facilities for major and smaller airlines. It operates as a large-hub, full-service airport serving major US cities and international cities with an average of 1,300 daily flights.<sup>19</sup> The County of San Mateo prepared an ALUCP for the San Francisco International Airport in accordance with the Caltrans Division of Aeronautics' California Airport Land Use Planning Handbook.

Portions of the project site, as depicted in Figure 4.8-1, *Airport Influence Areas*, are within areas where heights of structures are regulated under FAR Part 77 regulations and would be subject to height limit concerns. With adherence to applicable procedures and requirements described above, future

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<sup>18</sup> City/County Association of Governments of San Mateo County, 2012, Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. [https://ccag.ca.gov/wp-content/uploads/2014/10/Consolidated\\_CCAG\\_ALUCP\\_November-20121.pdf](https://ccag.ca.gov/wp-content/uploads/2014/10/Consolidated_CCAG_ALUCP_November-20121.pdf), accessed February 23, 2023.

<sup>19</sup> San Francisco International Airport, 2019, SFO Flight Patterns and Operations. <https://www.flysfo.com/about/community-noise/noise-office/flight-patterns-operations#:~:text=Flights%20operate%20out%20of%20SFO,about%201%2C300%20flights%20each%20day>, accessed February 23, 2023.

## HAZARDS AND HAZARDOUS MATERIALS

development projects under the proposed project would not contribute to airport-related hazards and the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>HAZ-6</b>	<b>The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</b>
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Regional access to and from San Mateo is limited to State Route (SR-) 82, SR-92, and US Highway 101. Several larger arterials in the EIR Study Area funnel traffic to larger arterials and freeways. At the same time, most major roadways and transit routes exiting the community are located near or within a liquefaction zone, landslide zone, dam inundation zones, very high fire severity hazard zones, and other hazards. Any of these disasters can cause damage to transportation infrastructure, preventing or impeding access by emergency responders and evacuation by residents. Future development under the proposed project would result in construction activities that could temporarily affect roadways as a result of lane closures or narrowing for roadway and/or utility improvements. This could affect emergency response times or evacuation routes. By increasing the residential and daytime population in the EIR Study Area, traffic congestion may increase in areas of the EIR Study Area as well. Therefore, in the event of an accident or natural disaster, evacuation plans and routes could be adversely affected by the increased traffic.

In 2021, the County of San Mateo updated and adopted a FEMA-approved Multi-Jurisdictional Local Hazard Mitigation Plan that includes a review of the hazards that threaten our community and identifies ways to reduce the damage from the risks associated with earthquakes, floods, and wildfire hazards.<sup>20</sup> The Multi-Jurisdictional Local Hazard Mitigation Plan emphasizes hazard mitigation prior to disasters, including maintenance of infrastructure, requirements for new construction beyond the latest edition of the California Building Code, and education of residents and community groups.

The proposed project would not result in substantial changes to the circulation patterns or emergency access routes, and would not block or otherwise interfere with use of evacuation routes. Future development would not interfere with operations of emergency response agencies or with coordination and cooperation between such agencies. Furthermore, impacts to emergency response planning are reduced by various goals, policies, and actions of the proposed General Plan, as listed in impact discussion HAZ-1. Impacts would therefore be *less than significant*. Please also see impact discussion WILD-1 in Chapter 4.18, *Wildfire*, of this Draft EIR for further discussion of emergency response and evacuation.

**Significance without Mitigation:** Less than significant.

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<sup>20</sup> Tetra Tech, 2021, County of San Mateo Multi-Jurisdictional Local Hazard Mitigation Plan, <https://www.smcgov.org/media/53471/download?inline=,> accessed May 30, 2023.

## HAZARDS AND HAZARDOUS MATERIALS

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<b>HAZ-7</b>	<b>The proposed project would, in combination with past, present, and reasonably foreseeable projects, result in cumulative hazards and hazardous materials impacts in the area.</b>
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The area considered for cumulative impacts is San Mateo County, which is the service area for the San Mateo County Environmental Health Division, the affected CUPA. Other development projects throughout the county would use, store, transport, and dispose of increased amounts of hazardous materials, and thus could pose substantial risks to the public and the environment. However, the use, storage, transport, and disposal of hazardous materials by other projects would conform with regulations of multiple agencies as described in Section 4.8.1.1, *Regulatory Framework*, above. Other projects would also have to comply with multiple local regulations associated with their location.

The EIR Study Area is partially located within the San Carlos Airport and San Francisco International Airport AIAs. However, as detailed in impact discussion HAZ-5, potential flight hazards would be avoided. Therefore, the proposed project would not contribute to a cumulative impact associated with a public or private airport.

Cumulative projects have the potential to interfere with an adopted emergency response plan or emergency evacuation plan; however, all development would be required to comply with the provisions of the local, State, and federal regulations for emergency response plans and emergency evacuation plans. Compliance with these regulations would reduce potential cumulative impacts related to emergency response plans and evacuation plans. Therefore, cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## HYDROLOGY AND WATER QUALITY

### 4.9 HYDROLOGY AND WATER QUALITY

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential hydrology and water quality impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.9.1 ENVIRONMENTAL SETTING

##### 4.9.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

###### *Clean Water Act*

The United States Environmental Protection Agency (USEPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) (codified at 33 United States Code Sections 1251 to 1376) of 1972 is the primary federal law that governs and authorizes water quality control activities by the EPA, as well as the states. Various elements of the CWA, which address water quality, are discussed below.

Permits to dredge or fill waters of the United States are administered by the United States Army Corps of Engineers (USACE) under Section 404 of the CWA. “Waters of the United States” are defined as territorial seas and traditional navigable waters, perennial and intermittent tributaries to those waters, lakes and ponds and impoundments of jurisdictional waters, and wetlands adjacent to jurisdictional waters. The regulatory branch of the USACE is responsible for implementing and enforcing Section 404 of the CWA and issuing permits. Any activity that discharges fill material and/or requires excavation in waters of the United States must obtain a Section 404 permit. Before issuing the permit, the USACE requires that an analysis be conducted to demonstrate that the proposed project is the least environmentally damaging practicable alternative. Also, the USACE is required to comply with the National Environmental Policy Act before it may issue an individual Section 404 permit.

Under Section 401 of the CWA, every applicant for a Section 404 permit that may result in a discharge to a water body must first obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. Certifications are issued in conjunction with USACE Section 404 permits for dredge and fill discharges. In addition, an application for Individual Water Quality Certification and/or Waste Discharge Requirements must be submitted for any activity that would result in the placement of dredged or fill material in waters of the State that are not jurisdictional to the USACE, such as isolated wetlands, to ensure that the proposed activity complies with State water quality standards. In California, the authority to either grant water quality certification or waive the requirement is delegated by the State Water Resources Control Board (SWRCB) to its nine Regional Water Quality Control Boards (RWQCB).



## HYDROLOGY AND WATER QUALITY

Under federal law, the USEPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires the USEPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. In California, the USEPA has delegated authority to the SWRCB and its RWQCBs to identify beneficial uses and adopt applicable water quality objectives.

When water quality does not meet CWA standards and compromises designated beneficial uses of a receiving water body, Section 303(d) of the CWA requires that water body be identified and listed as “impaired”. Once a water body has been designated as impaired, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards, with a factor of safety included. Once established, the TMDL allocates the loads among current and future pollutant sources to the water body.

### *National Pollutant Discharge Elimination System*

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (MS4). Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Under the NPDES Program, all facilities that discharge pollutants into waters of the United States are required to obtain a NPDES permit. Requirements for stormwater discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs. The City of San Mateo lies within the jurisdiction of San Francisco Bay RWQCB (Region 2) and is subject to the waste discharge requirements for the Municipal Separate Storm Sewer System (MS4) Permit (Order No. R2-2022-0018 and NPDES Permit No. CAS612008).

Under Provision C.3 of the MS4 Permit, the co-permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is accomplished primarily through the implementation of low impact development techniques. In addition, projects that create and/or replace one acre or more of impervious surfaces must comply with the hydromodification requirements specified in the C.3.g provisions of the MS4 permit. These requirements include implementing stormwater control measures such that post-project runoff must match pre-project runoff from 10 percent of the pre-project 2-year flow rate up to the pre-project 10-year peak flow.

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### *Federal Emergency Management Agency*

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year.

Additionally, FEMA has developed requirements and procedures for evaluating earthen levee systems and mapping the areas affected by those systems. Levee systems are evaluated for their ability to provide protection from 100-year flood events, and the results of this evaluation are documented in the FEMA Levee Inventory System. Levee systems must meet minimum freeboard standards and must be maintained according to an officially adopted maintenance plan. Other FEMA levee system evaluation criteria include structural design and interior drainage.

As required by the FEMA regulations, all development constructed within the Special Flood Hazard Zone (as delineated on the FIRM) must be elevated so that the lowest floor is at or above the base flood elevation level. The term "development" is defined by FEMA as any human-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials. Per these regulations, if development in these areas occurs, a hydrologic and hydraulic analysis must be performed prior to the start of development and must demonstrate that the development does not cause any rise in base flood elevation levels, because no rise is permitted within regulatory floodways. Upon completion of any development that changes existing Special Flood Hazard Area boundaries, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision, as soon as practicable, but not later than six months after such data become available.

### *Rivers and Harbors Act of 1899*

Under the Rivers and Harbors Act of 1899, the USACE requires permits for activities involving the obstruction of the navigable capacity of any waters of the United States or the construction of any structures in or over navigable waters of the United States, including ports, canals, navigable rivers, or other waters. "Navigable waters" under Section 10 of the Rivers and Harbors Act are defined as "those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce." Pursuant to Section 10 of the Rivers and Harbors Act, the USACE administers this regulatory program separate from the Section 404 program. A Section 10 permit may be required for structures or work outside the limits of navigable waters if the structure or work affects the course, location, condition, or capacity of the water body.

## HYDROLOGY AND WATER QUALITY

### *Fish and Wildlife Coordination Act*

The Fish and Wildlife Coordination Act provides the basic authority for the United States Fish and Wildlife Service (USFWS) to evaluate impacts to fish and wildlife from proposed water resource development projects. This act requires that all federal agencies consult with the USFWS, the National Marine Fisheries Service, and State wildlife agencies (i.e., the California Department of Fish and Wildlife or CDFW) for activities that affect, control, or modify waters of any stream or bodies of water. Under this act, the USFWS has responsibility for reviewing and commenting on all water resources projects. For example, it would provide consultation to the USACE prior to issuance of a Section 404 permit.

If a project may result in the “incidental take” of a listed species, an incidental take permit is required. An incidental take permit allows a developer to proceed with an activity that is legal in all other respects but that results in the “incidental taking” of a listed species. A habitat conservation plan must also accompany an application for an incidental take permit. The purpose of a habitat conservation plan is to ensure that the effects of the permitted action on listed species are adequately minimized and mitigated.

## State Regulations

### *Porter-Cologne Water Quality Act*

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. This act established the SWRCB and divided the state into nine regional basins, each under the jurisdiction of an RWQCB. The SWRCB is the primary State agency responsible for the protection of California’s water quality and groundwater supplies. The RWQCBs carry out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a water quality control plan or basin plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region’s ground and surface water, and local water quality conditions and problems. As stated previously, San Mateo is within the jurisdiction of the San Francisco Bay RWQCB (Region 2).

The Porter-Cologne Act also authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, or other approvals. Other State agencies with jurisdiction over water quality regulation in California include the California Department of Health Services for drinking water regulations, the CDFW, and the Office of Environmental Health and Hazard Assessment.

### *State Water Resources Control Board*

In California, the SWRCB has broad authority over water quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA. It also regulates public drinking water systems, NPDES wastewater discharges, water quality monitoring, water recycling programs, landfill disposal, water rights, and implements drought restrictions. As stated previously, the City of San Mateo is within the jurisdiction of the San Francisco Bay RWQCB (Region 2), which regulates surface water and groundwater quality in the

## HYDROLOGY AND WATER QUALITY

watershed that encompasses the following counties: Alameda, Contra Costa, San Francisco, Santa Clara (north of Morgan Hill), San Mateo, Marin, Sonoma, Napa and Solano.

### SWRCB General Construction Permit

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the newly reissued SWRCB Construction General Permit (Order WQ 2022-0057-DWQ). Under the terms of the permit, applicants must file Permit Registration Documents (PRD) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent, risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a SWPPP containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a sampling program to ensure compliance with water quality standards, and on-site collection of samples and inspection of BMPs during a qualifying precipitation event.

In addition, the City, under San Mateo Municipal Code (SMMC) Section 23.40.040(a), has the authority to require submittal of an interim and final Erosion and Sediment Control Plan (ESCP), if required by the City Engineer or Building Official. The ESCP must describe erosion and sediment control measures that will be implemented during the construction phase as well as final stabilization control measures as well as the calculation of maximum surface runoff amounts and sediment yield. This requirement may apply to projects that are less than one acre in size if they require grading permits or building permits that could result in non-stormwater discharges to a storm drain. Projects subject to the SWRCB Construction General Permit may include the ESCP provisions within the SWPPP.

### SWRCB Board General Industrial Permit

The Statewide General permit for Storm Water Discharges Associated with Industrial Activities, Order No. 2014-0057-DWQ and amended by 2015-0122-DWQ (2018) implements the federally required storm water regulations in California for storm water associated with industrial activities that discharge to waters of the United States. This regulation covers facilities that are required by federal regulations or by the RWQCBs to obtain an NPDES permit. Dischargers are required to eliminate non-storm water discharges, develop SWPPPs that include BMPs, conduct monitoring of stormwater runoff, and submit all compliance documents via the SWRCB's SMARTS program.

### SWRCB Trash Amendments

On April 7, 2015, the SWRCB adopted an amendment to the *Water Quality Control Plan for Ocean Waters of California* to control trash and Part 1, Trash Provisions, of the *Water Quality Control Plan for Inland*

## HYDROLOGY AND WATER QUALITY

*Surface Waters, Enclosed Bays, and Estuaries of California.* They are collectively referred to as “the Trash Amendments.” The Trash Amendments apply to all surface waters of California and include a land-use-based compliance approach to focus trash controls on areas with high trash-generation rates. Areas such as high density residential, industrial, commercial, mixed urban, and public transportation stations are considered priority land uses. There are two compliance tracks for Phase I and Phase II MS4 permittees:

- Track 1: Permittees must install, operate, and maintain a network of certified full capture systems in storm drains that capture runoff from priority land uses.
- Track 2: Permittees must implement a plan with a combination of full capture systems, multibenefit projects, institutional controls, and/or other treatment methods that have the same effectiveness as Track 1 methods.

The Trash Amendments provide a framework for permittees to implement their provisions. Full compliance must occur within 10 years of the permit, and permittees must also meet interim milestones such as average load reductions of 10 percent per year. The amendment mandates that the City needs to install catch basin filters on all City catch basins by December 2, 2030.<sup>1</sup>

### *California Water Code Section 13751: Water Wells*

Section 13751 of the Water Code requires a Well Completion Report (WCR) to be completed by each person who digs, bores, or drills a water well, cathodic protection well, groundwater monitoring well, or geothermal heat exchange well or abandons or modifies an existing well. The WCR should be filed with the California Department of Water Resources (DWR) within 60 days of the date that construction, alteration, abandonment, or destruction of a well is completed.<sup>2</sup> Completed WCRs are sent to and maintained at the DWR regional office that serves the area where the well is located.

### *California Coastal Act of 1976*

The California Coastal Act of 1976 established three designated coastal management agencies to plan and regulate the use of land and water in the coastal zone: the California Coastal Commission, the San Francisco Bay Conservation and Development Commission (BCDC), and the California Coastal Conservancy. Under California’s federally approved Coastal Management Program, the California Coastal Commission manages development along the California coast except for San Francisco Bay, which is overseen by the BCDC. The City of San Mateo is under the jurisdiction of the BCDC for all land within 100 feet of the shoreline. The mission of the California Coastal Conservancy is to purchase, protect, restore, and enhance coastal resources and provide shoreline access. Additional information on the BCDC is discussed under Regional Regulations, below.

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<sup>1</sup> State Water Resources Quality Control Board, September 2022, Storm Water Program - Trash Implementation Program. [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/trash\\_implementation.html](https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html), accessed April 4, 2023.

<sup>2</sup> California Department of Water Resources, 2022, Well Completion Reports, <https://water.ca.gov/Programs/Groundwater-Management/Wells/Well-Completion-Reports>, accessed October 5, 2022.

## HYDROLOGY AND WATER QUALITY

### *California Department of Fish and Wildlife*

The CDFW protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Sections 1601 to 1606 of the California Fish and Game Code. The Fish and Game Code stipulates that it is “unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake” without notifying the CDFW, incorporating necessary mitigation, and obtaining a streambed alteration agreement. CDFW’s jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation.

### *Water Conservation in Landscaping Act of 2006*

The Water Conservation in Landscaping Act includes the State of California’s Model Water Efficient Landscape Ordinance (MWELO), which requires cities and counties to adopt landscape water conservation ordinances. The MWELO was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and build resiliency for future droughts. State law requires all land use agencies, which includes cities and counties, to adopt a WELO that is at least as efficient as the MWELO prepared by the DWR. The 2015 revisions to the MWELO improve water conservation in the landscaping sector by promoting efficient landscapes in new developments and retrofitted landscapes. The revisions increase water efficiency by requiring more efficient irrigation systems, incentives for grey water usage, improvements in on-site stormwater capture, and limiting the portion of landscapes that can be covered in high-water-use plants and turf. New development projects that include landscape areas of 500 square feet or more are subject to the MWELO. This applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review. The previous landscape size threshold for new development projects was 2,500 square feet.<sup>3</sup> The size threshold for rehabilitated landscapes has not changed and remains at 2,500 square feet. SMMC Chapter 23.72, *Water Conservation in Landscaping*, adopts these requirements.

## Regional Regulations

### *San Francisco Bay Regional Water Quality Control Board*

The City of San Mateo is within the jurisdiction of the San Francisco Bay RWQCB (Region 2). The San Francisco Bay RWQCB addresses regionwide water quality issues through the creation and triennial update of the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan). The Basin Plan was adopted in 1995 and most recently amended in November 2020.<sup>4</sup> This Basin Plan designates beneficial uses of the State waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The *Water Quality Control Policy for the Enclosed Bays and Estuaries of*

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<sup>3</sup> County of San Mateo, 2022, Water Efficient Landscape Ordinance (WELO), <https://www.smcgov.org/planning/water-efficient-landscape-ordinance-welo>, accessed April 4, 2023.

<sup>4</sup> California Regional Water Quality Control Board, San Francisco Bay Region, May 2017, *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*, [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/planningtmdls/basinplan/web/docs/BP\\_all\\_chapters.pdf](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/BP_all_chapters.pdf), accessed April 4, 2023.



## HYDROLOGY AND WATER QUALITY

*California*, as adopted by the SWRCB in 1995 and last amended in 2018, also provides water quality principles and guidelines to prevent water quality degradation and protect the beneficial uses of waters of enclosed bays and estuaries.<sup>5</sup> The San Francisco Bay RWQCB also administers the MS4 permit for San Mateo County and the municipalities within San Mateo County, including the City of San Mateo.

### *San Francisco Bay Conservation and Development Commission*

The California Coastal Act carries out its mandate locally through the BCDC. BCDC's jurisdiction for San Francisco Bay includes all sloughs, marshlands between mean high tide and five feet above mean sea level, tidelands, submerged lands, and land within 100 feet of the shoreline. This includes the San Francisco Bay shorelines within the EIR Study Area.

The current BCDC policy allows for the protection of existing and planned development from flooding by the placement of fill, encourages innovative means of dealing with flood danger, and states that local governments will determine how best to deal with development projects inland of BCDC's jurisdiction, which extends 100 feet inland from the shoreline. The provisions of BCDC's *San Francisco Bay Plan* do not apply outside BCDC's jurisdiction for purposes of implementing the California Environmental Quality Act (CEQA).<sup>6</sup>

The new BCDC policies require sea level rise risk assessments to be conducted when planning shoreline areas or designing large shoreline projects within BCDC's jurisdiction. Risk assessments are not required for repairs of existing facilities, interim projects, small projects that do not increase risks to public safety, and infill projects within existing urbanized areas. Projects within the shoreline band, the area within 100 feet of the shoreline, need only address risks to public access.

As a permitting authority along the San Francisco Bay shoreline, BCDC is responsible for granting or denying permits for any proposed fill, extraction of materials, or change in the use of any water, land, or structure within BCDC's jurisdiction. Permits may be granted or denied only after public hearings and after the process for review and comment has been completed by the City. BCDC will approve the permit if it is determined that the project is in accordance with defined standards for use of the shoreline, provisions for public access, and advisory review of appearance.

Projects within BCDC jurisdiction that involve bay fill must be consistent with the policies of the BCDC's *San Francisco Bay Plan* on the safety of fills and shoreline protection. Land elevation changes caused by tectonic activity or consolidation/compaction of soft soils, such as bay muds, is variable around the San Francisco Bay. Consequently, some parts of the San Francisco Bay may experience a greater relative rise in sea level than other areas. According to BCDC policies, new projects built on fill or near the shoreline should be set back from the edge of the shore so that the project will not be subject to dynamic wave

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<sup>5</sup> State Water Resources Control Board, 1995, *Water Quality Control Policy for the Enclosed Bays and Estuaries of California, as Adopted by Resolution No. 95-84 on November 16, 1995*, [https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/1995/rs1995\\_0084.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1995/rs1995_0084.pdf), accessed April 4, 2023.

<sup>6</sup> San Francisco Bay Conservation and Development Commission, 2011, *Resolution No. 11-08: Adoption of Bay Plan Amendment Adding New Climate Change Findings and Policies to the Bay Plan*, [https://www.bcdc.ca.gov/proposed\\_bay\\_plan/10-01Resolution.pdf](https://www.bcdc.ca.gov/proposed_bay_plan/10-01Resolution.pdf), accessed April 4, 2023.

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energy; be built so the bottom floor of structures will be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project; be specifically designed to tolerate periodic flooding; or employ other effective means of addressing the impacts of future sea level rise and storm activity.

### *Municipal Regional Stormwater NPDES Permit*

Municipal stormwater discharge in the City of San Mateo is subject to the Waste Discharge Requirements (WDRs) of the MS4 Permit (Order No. R2-2022-0018 and NPDES Permit No. CAS612008). Provision C.3 of the MRP requirements applies to all new development or redevelopment projects that create or replace 5,000 square feet of impervious surfaces. Provision C.3 of the MS4 Permit also mandates that new development and redevelopment projects must: (1) incorporate site design, source control, and stormwater treatment on-site; (2) minimize the discharge of pollutants in stormwater runoff and non-stormwater discharge; and (3) minimize the rate and volume of stormwater runoff under post-development conditions. Low-impact development (LID) methods are the primary mechanisms for implementing such controls.

New development projects must design and construct stormwater treatment systems that capture a percentage of the flow rate or volume from a specified storm event based on the sizing criteria described in the C.3 provisions of the MRP. The treatment systems use LID measures that include rainwater harvesting and reuse, infiltration, evapotranspiration, and biotreatment/bioretenion.

In order to comply with Provision C.3 of the MS4 Permit, regulated projects would be required to submit a Stormwater Control Plan (SCP) and C.3 and C.6 Development Review Checklist with building plans, to be reviewed and approved by the City of San Mateo. The SCP must be prepared under the direction of and certified by a licensed and qualified professional, which includes civil engineers, architects, or landscape architects.

### *San Mateo Countywide Water Pollution Prevention Program*

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is a partnership of the City/County Association of Governments (C/CAG), the County of San Mateo, and 20 incorporated cities within the county, which share a common NPDES permit. This partnership also relies on each of the municipalities to implement local stormwater pollution prevention and control activities for its own local storm drain systems. The SMCWPPP's Stormwater Resource Plan (SRP) outlines priorities, key elements, strategies, and evaluation methods to implement the SMCWPPP. The comprehensive program includes pollution reduction activities for construction sites, industrial sites, illegal discharges and illicit connections, new development, and municipal operations. The SRP also includes a public education effort, target pollutant reduction strategies, and watershed assessment and monitoring. The SRP, in conjunction with the NPDES permit adopted by the Water Board, is designed to enable SMCWPPP to meet the requirements of the CWA.

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Post-construction stormwater quality requirements pursuant to the SMCWPPP are described in the C.3 Regulated Projects Guide (Version 1.0) issued in January 2020.<sup>7</sup> The C.3 Regulated Projects Guide includes instructions for implementing site design measures, source controls, stormwater treatment measures, construction site controls, and low-impact development measures.

### *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan*

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan* (MJHMP), updated in 2021 in accordance with the federal Disaster Mitigation Action of 2000 (DMA 2000), provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term risk to people and property from these hazards. The San Mateo Jurisdictional Annex of the MJHMP provides an assessment of hazards and vulnerabilities, and a set of mitigation actions for San Mateo specifically while considering the results from the countywide effort. In the context of an MJHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including wildfire. Mitigation actions related to flood, sea level rise, and dam failure in the San Mateo Jurisdictional Annex of the MJHMP include participation in mutual aid agreements, continued implementation of floodplain management measures, incorporation of FEMA guidelines into the planning process, assessment and mitigation of urban drainage flooding, and incorporation of San Mateo County's sea level rise vulnerability assessments recommendations into city plans.

The MJHMP must be reviewed and approved by the Federal Emergency Management Agency (FEMA) every five years to maintain eligibility for disaster relief funding. As part of this process, the California Governor's Office of Emergency Services reviews all local hazard mitigation plans in accordance with DMA 2000 regulations and coordinates with local jurisdictions to ensure compliance with FEMA's Local Mitigation Plan Review Guide. As part of the proposed project, the MJHMP is adopted in its entirety into the proposed Safety Element by reference.

### *San Mateo County Storm Water Resources Plan*

The San Mateo County Stormwater Resource Plan (SRP) is a comprehensive document that addresses specific stormwater runoff issues in the county with a watershed-based approach. The main goals of the SRP are to identify and prioritize opportunities to better utilize stormwater as a resource in San Mateo County through a detailed analysis of watershed processes, surface and groundwater resources, input from stakeholders and the public, and analysis of multiple benefits that can be achieved through strategically planned stormwater management projects.<sup>8</sup> These projects aim to capture and manage stormwater more sustainably, reduce flooding and pollution associated with runoff, improve biological functioning of plants, soils, and other natural infrastructure, and provide many community benefits, including cleaner air and water and enhanced aesthetic value of local streets and neighborhoods. Senate

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<sup>7</sup> San Mateo Countywide Water Pollution Prevention Program, January 2020, *C.3 Regulated Projects Guide*, [https://www.flowstobay.org/wp-content/uploads/2020/03/SMCWPPP-C.3-Regulated-Project-Guide-High-Res\\_021220\\_0.pdf](https://www.flowstobay.org/wp-content/uploads/2020/03/SMCWPPP-C.3-Regulated-Project-Guide-High-Res_021220_0.pdf), accessed April 4, 2023.

<sup>8</sup> City/County Association of Governments of San Mateo, February 2017, *Stormwater Resource Plan for San Mateo County*, <https://ccag.ca.gov/wp-content/uploads/2017/02/SMC-SRP-Report-FINAL-1.pdf>, accessed April 4, 2023.

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Bill 985 (Pavley, 2014) requires SRPs to be developed to be eligible for funding from future State bond measures for stormwater and dry weather capture projects.<sup>9</sup>

### *San Mateo County Flood & Sea Level Rise Resiliency District (OneShoreline)*

In April 2018, the C/CAG Countywide Water Coordination Committee proposed the formation of a countywide agency to address sea level rise, flooding, coastal erosion, and regional stormwater infrastructure. Assembly Bill 825 was signed into law in September 2019 and, on January 1, 2020, the San Mateo County Flood and Sea Level Rise Resiliency District, more commonly known as OneShoreline, was formed.

With startup funding from San Mateo County and 20 incorporated cities, OneShoreline has initiated several projects to protect against the impact of sea level rise. In terms of financial losses due to climate change, San Mateo County is the most vulnerable county in California. By 2100, it is estimated that over 40 percent of the land could be affected.<sup>10</sup> OneShoreline is working with several cities within San Mateo County to update their General Plans, Specific Plans, and zoning ordinances to address future conditions brought on by climate change. They also are preparing a Planning Guidance Policy that can be used by cities and San Mateo County to account for climate-driven flooding, stormwater capture, groundwater rise, and sea level rise in planning documents, processes, and approvals. The City of San Mateo has provided several iterations of the proposed General Plan mapping, goals, policies, and actions relating to flooding, sea level rise, and groundwater to OneShoreline staff for review and comment.

## Local Regulations

### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to hydrology and water quality are primarily in the Conservation, Open Space, Parks and Recreation Element, Public Services and Facilities (PSF) Element, and Safety Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.9.3, *Impact Discussion*.

### *City of San Mateo Municipal Code*

The SMMC includes various directives pertaining to hydrology and water quality. The SMMC is organized by title, chapter, and section, and in some cases, articles. Provisions related to hydrology and water quality impacts are included in Title 7, *Health, Sanitation, and Public Nuisance*, and Title 23, *Buildings and Construction*.

<sup>9</sup> City/County Association of Governments of San Mateo, 2022, San Mateo Storm Water Resources Plan, <https://ccag.ca.gov/srp/>, accessed April 4, 2023.

<sup>10</sup> San Mateo County, 2023, OneShoreline, <https://oneshoreline.org/frequently-asked-questions/> accessed April 12, 2023.

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- Chapter 7.39, *Stormwater Management and Discharge Control*, aims to protect and enhance the water quality of the watercourses, water bodies, and wetlands within the City by eliminating non-stormwater discharges to the municipal separate storm drain, controlling the discharge to municipal separate storm drains from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in stormwater discharges to the maximum extent practicable. As stated in Section 7.39.090, *Discharge of Pollutants*, all discharges of material other than stormwater must be in compliance with a NPDES permit issued for the discharge. Construction projects must obtain a Stormwater Pollution Prevention Program construction permit from the Director of Public Works prior to site development planning application approval, as required by Section 7.29.170, *Stormwater Pollution Prevention Construction Permit*. Section 7.39.210, *Stormwater Treatment Facilities*, allows the Director to require permanent stormwater treatment facilities be designed into projects and Section 7.29.235, *Stormwater Management Permit*, requires a Stormwater Management permit from the Director prior to approval. Section 7.39.245, *Threatened Discharge*, prohibits the discharge of any domestic waste or industrial waste into storm drains, gutters, creeks, or San Francisco Bay.
- Chapter 23.33, *Floodplain management*, requires project applicants to obtain a development permit from the City's Floodplain Administrator and construct new development in accordance with the standards in SMMC Section 23.33.050, *Provisions for Flood Hazard Reduction*, prior to the start of construction or development within a Flood Hazard Area (i.e., 100-year floodplain). The standards of construction vary depending on whether the proposed structure is in a regular 100-year floodplain or in a coastal high hazard area. The standards of construction include provisions for flood risk reduction, including anchoring and flood-resistant materials and construction methods, with the lowest floors elevated above the base flood elevation or higher.
- Chapter 23.72, *Water Conservation in Landscaping*, requires project applicants of new construction and rehabilitated landscapes to complete the landscape project application and documentation package and comply with the landscape and irrigation maintenance schedule requirements listed in this chapter of the SMMC. Section 23.72.070, *Water Budget Calculations*, lists requirements for the project applicant to prepare water budget calculations. Section 23.72.090, *Irrigation Design Plan*, outlines the requirements for permanent irrigation systems for the efficient use of water. Section 23.72.100, *Grading Design Plan*, requires grading of a project site to be designed to minimize soil erosion, runoff, and water waste. Section 23.72.150, *Stormwater Management and Rainwater Retention*, requires implementation of stormwater BMPs consistent with the City stormwater management plans into the landscape and grading design plans to minimize runoff and to increase on-site rainwater retention and infiltration.
- Chapter 3.64, *Fees*, provides the authority for the City to issue fees subject to change for each fiscal year, as per the budget submitted by the City Manager to the City Council. Fees related to stormwater include fees to obtain a Stormwater Pollution Prevention Program (STOPP) Construction Permit from the City, an Erosion Control Compliance Fee (refundable deposit) for projects of one acre or more, and a Stormwater Management Permit Annual Fee.

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### 4.9.1.2 EXISTING CONDITIONS

#### Topography and Climate

The EIR Study Area extends from about 600 feet above sea level in the hills in the Highlands area to sea level on the northeastern edge of the city adjacent to San Francisco Bay. Most of the city is relatively flat with elevations ranging from 40 feet above sea level or less.

San Mateo has a Mediterranean climate, which consists of hot, dry summers and cool, wet winters. The area receives about 20 inches of rain annually, which is primarily recorded during the seven-month stretch between October and April. The winter average low temperature is about 41 degrees Fahrenheit in January and February, and the average summer high temperature is about 78 degrees Fahrenheit in September.<sup>11</sup> Due to two gaps in the Santa Cruz Mountains to the west, weather from the Pacific Ocean can result in gusty afternoon winds and fog in the late afternoon through early morning in the summer.

#### Regional Hydrology

San Mateo is located within the San Francisco Bay watershed, which is further divided into sub-watersheds. The EIR Study Area is located within seven sub-watersheds, as shown in Figure 4.9-1, *San Mateo Watersheds*. Water typically flows from the southwest to the northeast through natural and urbanized creeks and eventually drains into San Francisco Bay or the Marina Lagoon. The seven watersheds are described below:

- **San Mateo Creek Watershed.** The San Mateo Creek Watershed encompasses 35 square miles and originates near Sweeney Ridge in the Santa Cruz Mountains. It includes three reservoirs: San Andreas Lake, and Upper and Lower Crystal Springs Reservoirs. San Mateo Creek flows through parts of unincorporated San Mateo County, the Town of Hillsborough, and the City of San Mateo and flows into San Francisco Bay at Ryder Park.<sup>12</sup>
- **Laurel Creek Watershed.** The Laurel Creek Watershed drains approximately 4.6 square miles and originates near Laurelwood Park and Sugarloaf Mountain. Laurel Creek flows east into the O’Neill Slough and the Marina Lagoon. Stormwater runoff is controlled by three dams on Laurel Creek, which are crucial to prevent flooding in the surrounding neighborhoods during wet weather.
- **19<sup>th</sup> Avenue Watershed.** The 19<sup>th</sup> Avenue Watershed begins in the hills near the College of San Mateo. It includes Borel Creek, Madera Creek, and Beresford Creek. Flow from these creeks becomes underground channels for portions of the middle of the watershed and then resurfaces aboveground east of the CalTrain tracks and is designated as the 19<sup>th</sup> Avenue Drainage Channel. It eventually discharges into the Marina Lagoon.
- **16<sup>th</sup> Avenue Watershed.** The 16<sup>th</sup> Avenue Watershed is located between the San Mateo Watershed and 19<sup>th</sup> Avenue Watershed. Most of Leslie Creek that flows through San Mateo is an engineered

<sup>11</sup> Desert Research Institute, 2023. Period of Record Monthly Climate Summary, <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?casmat+sfo>, accessed on April 5, 2023.

<sup>12</sup> FlowsToBay, 2023, Major Creeks of San Mateo County. <https://www.flowstobay.org/data-resources/resources/creeks-of-san-mateo-county/> accessed on April 5, 2023.



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channel known as the 16<sup>th</sup> Avenue Drainage Channel, that flows northeast through the city, turning north and flowing between Lodi Avenue and Van Buren Street and then east and discharging into the Marina Lagoon at Bayside Park.

- **North San Mateo Watershed.** The North San Mateo Watershed encompasses the northern portion of San Mateo, including the North Shoreview neighborhood and portions of the North Center neighborhood. Stormwater runoff from this watershed drains directly to San Francisco Bay via storm drains under Poplar and Peninsula Avenues. Stormwater runoff discharges into San Francisco Bay near Seal Point Park.
- **Shoreview Park Watershed.** This watershed comprises a small area that includes the City's Wastewater Treatment Plant and a portion of the Shoreview neighborhood. Stormwater from this area is controlled by a pump station that pumps water directly into San Francisco Bay.
- **Mariners Island Watershed.** This watershed is east of Marina Lagoon and encompasses the Bridgepointe area and the neighborhoods of Harbortown and Mariner's Green. Stormwater discharge from this area drains directly into Marina Lagoon. A tidal gate near the mouth of Seal Slough regulates tidal influx from San Francisco Bay to the Marina Lagoon, which is important to prevent a population explosion of midges in the area.

### Local Hydrology

Stormwater runoff in the City of San Mateo is conveyed to San Francisco Bay and Marina Lagoon via a network of 130 miles of storm drains, 20 miles of creeks and drainage channels, a flood control lagoon, ten pump stations, and a three-mile Bayfront levee.<sup>13</sup> There are four major drainage basins within the city:<sup>14</sup>

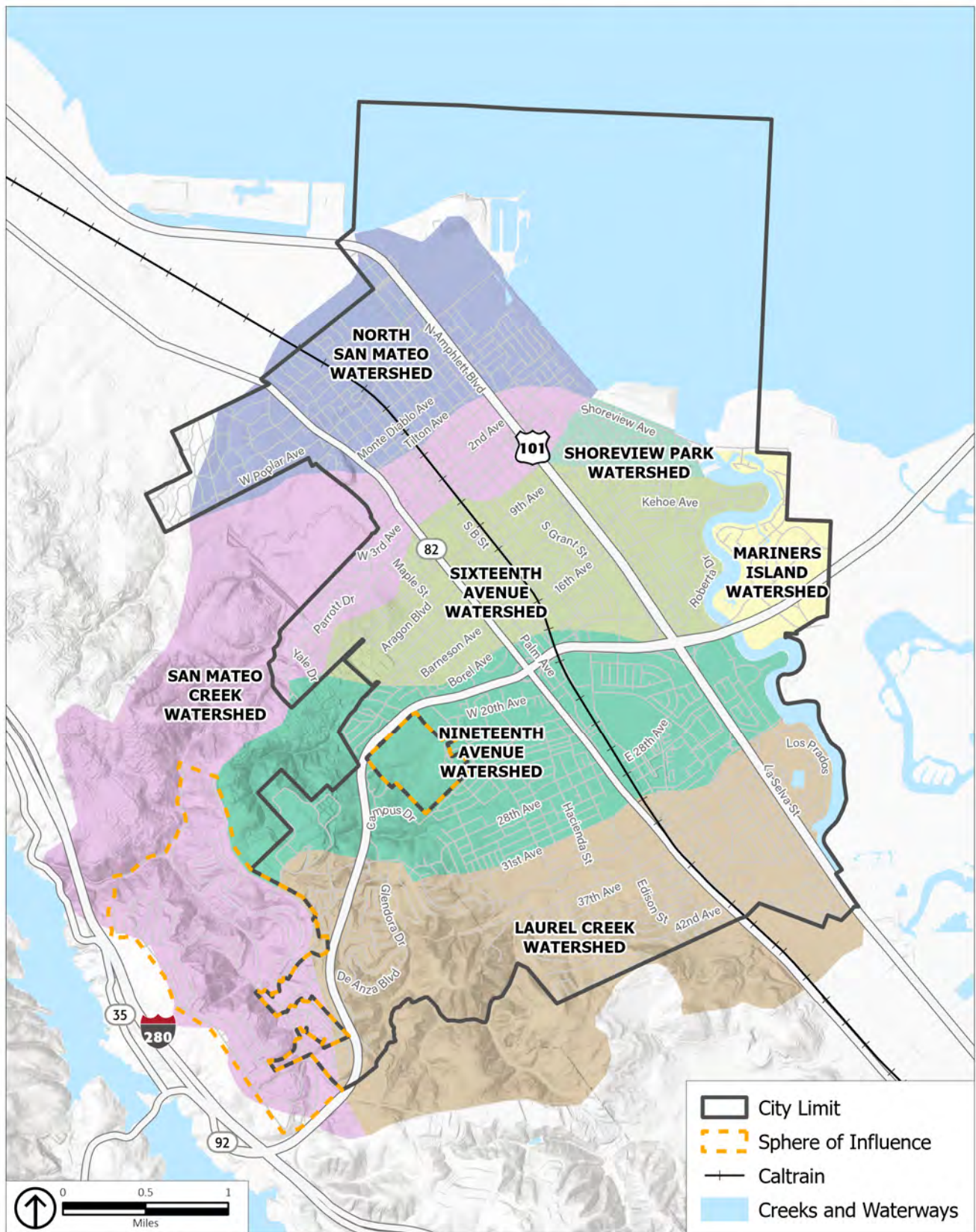
- The San Mateo Creek drainage basin encompasses 35 square miles, with four square miles within San Mateo. Approximately 30 percent of the City's stormwater drains into San Mateo Creek. Storm flows are regulated in the upper reaches of the creek by Lower Crystal Springs Dam and two reservoirs. The San Francisco Water Department controls winter and springtime releases from the dam to approximately 1,000 cubic feet per second (cfs), which is the capacity of the creek channel at Polhemus Bridge.
- The North San Mateo drainage basin is in the northeastern portion of the city, including the North Shoreview neighborhood and portions of the North Central neighborhood. Stormwater from this area drains directly into San Francisco Bay via storm drains beneath Poplar and Peninsula Avenues.
- The Marina Lagoon drainage basin includes the 16<sup>th</sup> Avenue Drainage Channel, the 19<sup>th</sup> Avenue Drainage Channel, Laurel Creek, and stormwater runoff that discharges directly into the Marina Lagoon. The drainage basin is located in the southern two-thirds of San Mateo and consists of approximately 10 square miles.

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<sup>13</sup> City of San Mateo, 2023, Clean Creeks and Flood Protection Initiative. <https://www.cityofsanmateo.org/2288/Clean-Creeks-and-Flood-Protection-Initia>, accessed on April 6, 2023.

<sup>14</sup> City of San Mateo, 2009, *City of San Mateo General Plan Update Draft Environmental Impact Report*, dated July 27, 2009.

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Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 4.9-1  
San Mateo Watersheds

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- The 3<sup>rd</sup> and Detroit drainage basin comprises a small area near the City's Wastewater Treatment Plant and a portion of the Shoreview neighborhood. Stormwater from this area is controlled by a pump station that pumps water directly into San Francisco Bay.

A Storm Drain Master Plan was completed in 2004 that analyzed the stormwater collection system and identified upgrade improvements for some areas of the city to provide adequate flood protection.

Based on the New Year's Eve storm and flooding event and the city's aging stormwater infrastructure, the City is proposing the Community Flood and Storm Protection Initiative, which would be a comprehensive stormwater system evaluation and upgrade program funded through a user fee and would include the following:

- Assessments of the current condition and capacity of the storm drain system
- An updated Storm Drain Master Plan
- Marina Lagoon dredging and maintenance
- Flood prevention and stormwater system capacity improvement programs
- Stormwater pump station upgrades
- Levee improvements

The initiative would require property owner approval via a citywide ballot measure and would cost homeowners approximately \$8 per month. The stormwater fee is scheduled for a vote by City residents on a Fall 2023 ballot.

### Groundwater

Most of the EIR Study Area is within the San Mateo Plain Subbasin of the Santa Clara Valley Groundwater Basin.<sup>15</sup> The southwestern portion of the city in the hills is not within a designated groundwater basin. This basin is designated as a very low priority basin and therefore is not regulated under the Sustainable Groundwater Management Act. This is because there is very little groundwater use in this basin (less than 2,700 acre-feet/year) and it is mostly due to private well pumping in the subbasin areas south of the City Limits (Redwood City and Menlo Park).

The EIR Study Area is served primarily by two water providers: California Water Service Company (Cal Water), Mid-Peninsula District and Estero Municipal Improvement District (EMID). Cal Water provides water service for most of the EIR Study Area, while EMID provides water to the Mariners Island portion of San Mateo. There are two small areas within the EIR Study Area at the end of West Poplar Avenue (approximately 15 acres) and at the end of Parrot Drive (approximately 7 acres) that are provided with potable water by the Town of Hillsborough. However, these areas do not use groundwater and are already developed with residential properties.

Cal Water and EMID supplies with water purchased from the San Francisco Public Utilities Commission (SFPUC). The SFPUC's water supplies consist of surface water imported from the Sierra Nevada via the

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<sup>15</sup> San Mateo County, 2023, San Mateo County GIS Open Data, San Mateo Plain Subbasin. <https://data-smcmaps.opendata.arcgis.com/datasets/san-mateo-plain-subbasin/explore?location=37.529784%2C-122.220423%2C11.96> accessed on April 6, 2023.

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Hetch Hetchy Project and local surface water from the San Francisco Bay Region. Groundwater is not used for municipal water supply in the city.<sup>16</sup>

Shallow groundwater is typically encountered in San Mateo at depths ranging from 3 to 20 feet below ground surface (bgs).<sup>17</sup> If construction dewatering is required with future development within the EIR Study Area, an application for a groundwater waste discharge permit must be completed and submitted to the City for review and approval. Required information includes the source and estimated discharge volume, proposed discharge point to the sewer system and list of contaminants (if present) and expected concentration. The applicant may be required to collect groundwater samples representative of the water quality anticipated in the discharge if construction dewatering occurs in an area of known or potential groundwater contamination.

### Water Quality

Surface water quality is affected by point-source and non-point source pollutants. Point source pollutants are emitted at a specific point, such as a pipe, and nonpoint-source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point-source pollutants are controlled with pollutant discharge regulations or water discharge requirements. Nonpoint-source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, the amount and frequency of rainfall, and irrigation practices. Runoff in developed areas typically contains oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the “first flush,” when early rainfall flushes out pollutants that have accumulated on hardscape surfaces during the preceding dry months.

The San Francisco Bay RWQCB monitors surface water quality through implementation of the Basin Plan and designates beneficial uses for surface water bodies and groundwater within San Mateo County and San Mateo. The beneficial uses for surface water bodies and groundwater within the EIR Study Area are listed in Table 4.9-1, *Designated Beneficial Uses of Water Bodies in the EIR Study Area*.

<sup>16</sup> California Water Service, 2021, *2020 Urban Water Management Plan: Mid-Peninsula District*.  
[https://www.calwater.com/docs/uwmp2020/MPS\\_2020\\_UWMP\\_FINAL.pdf](https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf), accessed April 6, 2023.

<sup>17</sup> Gregg Drilling, 2023, Northern California Groundwater Depth Table.

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**TABLE 4.9-1 DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE EIR STUDY AREA**

Water Body	Designated Beneficial Use
<b>Surface Water</b>	
San Mateo Creek	FRSH, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2
Polhemus Creek	COLD, WARM, WILD, REC-1, REC-2
Marina Lagoon	EST, WILD, REC-1, REC-2
Seal Slough	EST, RARE, WILD, REC-1, REC-2
Leslie Creek	WARM, WILD, REC-1, REC-2
Borel Creek	WARM, WILD, REC-1, REC-2
Laurel Creek	WARM, WILD, REC-1, REC-2
O'Neill Slough	EST, WILD, REC-1, REC-2
San Francisco Bay Lower	IND, COMM, SHELL, EST, MIGR, RARE, SPWN, WILD, REC-1, REC-2, NAV
<b>Groundwater</b>	
Santa Clara Valley, San Mateo Plain	MUN, PRO, IND, AGR (Potential Use)

Notes: Municipal and Domestic Water Supply (MUN), Industrial Process Water Supply (PRO), Industrial Service Water Supply (IND), Agricultural Supply (AGR), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Freshwater Replenishment (FRSH), Cold Freshwater Habitat (COLD), Fish Migration (MIGR), Navigation (NAV), Preservation of Rare and Endangered Species (RARE), Shellfish Harvesting (SHELL), Fish Spawning (SPWN), Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), Water Contact Recreation (REC-1), Noncontact Water Recreation (REC-2).

Source: San Francisco Bay RWQCB, 2019, *Water Quality Control Plan (Basin Plan)*.

In addition to the establishment of beneficial uses and water quality objectives, another approach to improve water quality is a watershed-based methodology that focuses on all potential pollution sources and not just those associated with point sources. If a body of water does not meet established water quality standards under traditional point source controls, it is listed as an impaired water body under Section 303(d) of the Clean Water Act. For 303(d) listed water bodies, a limit is established that defines the maximum amount of pollutants that can be received by that water body. Listed impaired water bodies in the EIR Study Area and their associated pollutants of concern are presented in Table 4.9-2, *Listed Impaired Water Bodies in San Mateo*.

**TABLE 4.9-2 LISTED IMPAIRED WATER BODIES IN SAN MATEO**

Name	Pollutants of Concern
Lower San Mateo Creek	Toxicity
Laurel Creek	Diazinon <sup>a</sup>
Marina Lagoon, Lakeshore Park Beach	Indicator Bacteria <sup>b</sup>
Marina Lagoon, Aquatic Park	Indicator Bacteria
Lower San Francisco Bay	<div> <div> <ul style="list-style-type: none"> <li>DDT <sup>c</sup></li> <li>Dioxin Compounds <sup>d</sup></li> <li>Furan Compounds <sup>e</sup></li> </ul> </div> <div> <ul style="list-style-type: none"> <li>Invasive Species</li> <li>Mercury</li> <li>PCBs <sup>f</sup></li> </ul> </div> <div> <ul style="list-style-type: none"> <li>Dieldrin <sup>a</sup></li> <li>Chlordane <sup>c</sup></li> <li>Trash</li> </ul> </div> </div>

Notes:

a. Used as an insecticide.

b. Pathogen bacteria (>126 E. Coli organisms per 100 ml).

c. Used as a pesticide.

d. Burning processes, such as commercial or municipal waste incineration, backyard burning, and the use of fuels, such as wood, coal, or oil, produce dioxins. The compounds collect in high concentrations in soils and sediments.

e. Furan is a flammable liquid compound found in common organic solvents.

f. PCBs were used widely in electrical equipment like capacitors and transformers. They were banned in the US in 1979.

Source: State Water Resource Control Board, 2023, California 2018 Integrated Report.

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### Flood Zones

FEMA determines floodplain zones to assist cities in mitigating flooding hazards through land use planning. FEMA also outlines specific regulations for any construction within a 100-year floodplain. The 100-year floodplain is defined as an area that has a 1 percent chance of being inundated during a 12-month period. FEMA also prepares maps for 500-year floods, which mean that, in any given year, the risk of flooding in the designated area is 0.2 percent.

In some locations, FEMA also provides measurements of base flood elevations for the 100-year flood, which is the minimum height of the flood waters during a 100-year event. Base flood elevation (BFE) is reported in feet above sea level. Depth of flooding is determined by subtracting the land's height above sea level from the base flood elevation. Areas within the 100-year flood hazard area that are financed by federally backed mortgages are subject to mandatory federal insurance requirements and building standards to reduce flood damage.

There are two main types of flooding that occur in the EIR Study Area: 1) tidal flooding and 2) riverine flooding. Tidal flooding occurs during king tides. Riverine flooding occurs when the local streams and rivers overtop their banks during extreme rainfall events. Coupled with flat topography and a high groundwater table, stormwater runoff from these events can exceed the capacity of the City's storm drain system. Tidal and riverine flooding can also occur simultaneously, and the effects are compounded by climate change and sea level rise. Localized flooding can also occur in flat, urbanized areas of the city after heavy rain events.

The City is susceptible to flooding from San Francisco Bay due to the combined effect of high tides, heavy storm flows, and sea level rise due to global warming. A series of levees protect the city from tidal flooding. Without this levee protection, the area between the railroad tracks and the Bay would be directly exposed to saltwater inundation.<sup>18</sup> The levee system includes floodwalls and pump stations to protect residents from 100-year flood scenarios. Non-federal levees are located along the shoreline of Seal Point Park and over 1,300 feet of levees have been upgraded along the San Mateo and Burlingame border.

A map of the EIR Study Area locations that are within the 100-year floodplains is shown on Figure 4.9-2, *Potential Flood Hazards*. FEMA maps areas at risk of inundation from a 100-year flood, which has a one percent chance of occurring in any year, and a 500-year flood, where the risk of flooding is 0.2 percent annually, as shown in Figure 4.9-2. These areas are primarily located along creeks, including Laurel Creek and San Mateo Creek, and east of El Camino Real. The 100-year flood zone is also known as a Special Flood Hazard Area; homeowners with mortgages within the Special Flood Hazard Area are required to be protected by flood insurance. The locations of the 500-year floodplain are also shown on Figure 4.9-2, but there are no restrictions on building within the 500-year floodplain. Figure 4.9-2 also shows the levees and floodwalls along the shoreline areas of the city and along San Mateo Creek and Marina Lagoon. The map also shows the areas in the city that are outside of the 100-year and 500-year floodplains due to protection from the levee system.

<sup>18</sup> City of San Mateo, 2017, San Mateo Local Hazard Mitigation Plan.



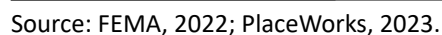


Figure 4.9-2  
Potential Flood Hazards

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As shown on Figure 4.9-2, most of the area in the northern portion of San Mateo north of the San Mateo Creek outlet and east of El Camino Real is in the 100-year floodplain as well as the banks of the various rivers and Marina Lagoon that run through San Mateo. Most of the area south of San Mateo Creek is not in the 100-year floodplain due to protection from levees.

In 2018, FEMA performed a coastal study with a preliminary map dated April 5, 2019. An estimated 176 homes within the North Central neighborhood were added to the 100-year floodplain. A map of the added 100-year floodplain areas is shown on Figure 4.9-3, *2019 Revised Floodplain Map of San Mateo*.

In May 2020, the North Shoreview Flood Improvement Project was approved, and an Assessment District was formed for the North Shoreview and North Central neighborhoods to fund a portion of the improvements. The scope of work includes raising 1,300 feet of the levee segment between San Mateo and Burlingame off Airport Boulevard and increasing the pump capacity at the Coyote Point and Poplar Avenue pump stations. The project has been completed and the documentation is being submitted to FEMA for review. Once FEMA accredits the levee system, the newly added areas would be removed from the 100-year floodplain and the FEMA map would be revised.

Remaining projects to address tidal flooding include raising the North Levee at Coyote Point Beach, constructing an inboard levee, and upgrading the Coyote Point and Poplar pump stations. Remaining projects to address riverine flooding include capacity and drainage improvements to Laurel Creek in the vicinity of the San Mateo/Glendale Village neighborhood. Other sources of residual flooding that will be addressed in future capital improvement programs include overflows from San Mateo Creek near El Camino and capacity restrictions and local drainage at the 19<sup>th</sup> Avenue Channel.<sup>19</sup>

In addition, the City of Foster City is implementing the Levee Improvement Project, which includes sheet pile floodwalls, earthen levees, and conventional floodwalls, intended to protect the area from a 100-year storm and up to 3 feet of sea level rise. The levee improvement project would provide flood protection in accordance with FEMA guidelines to retain FEMA levee accreditation for approximately 17,000 properties in Foster City and San Mateo.<sup>20</sup>

### Dam Inundation Zones

Partial or complete dam failures can occur from one or more of the following causes:

- Earthquake
- Overtopping caused by floods that exceed the dam capacity due to Inadequate spillway capacity
- Internal erosion caused by embankment or foundation leakage, or piping/rodent activity
- Improper design resulting in structural failure of dam materials
- Foundation failure
- Inadequate operation, maintenance and upkeep
- Settling and cracking of concrete or embankment dams

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<sup>19</sup> City of San Mateo, 2023, FEMA Flood Zone Overview. <https://www.cityofsanmateo.org/1794/FEMA-Flood-Zone-History> accessed on April 7, 2023.

<sup>20</sup> City of Foster City, 2023, Foster City Levee Improvements Project, <https://fostercitylevee.org/>, accessed on May 24, 2023.

## HYDROLOGY AND WATER QUALITY

- Failure of upstream dams on the same waterway.

There are six dams that have the potential to cause flooding in San Mateo in the event of a catastrophic dam failure: San Andreas, Lower Crystal Springs, Laurel Creek, two dams on East Laurel Creek, and Tobin Creek in Hillsborough. The two East Laurel Creek Dams control peak stormwater runoff and are too small to be regulated by the California Division of Safety of Dams (DSOD). The Tobin Creek Dam is also too small to be regulated and these three dams do not have mapped inundation zones. However, failure of these dams would only result in very localized flooding. The other three dams (San Andreas, Lower Crystal Springs, and Laurel Creek) are large enough to be regulated by the DSOD.

California Water Code requires owners of all dams under DSOD jurisdiction (except dams classified as low downstream hazard) to prepare dam inundation maps. These maps must be updated every ten years or when there are changes to downstream development or terrain. The dam inundation maps are submitted to DSOD for review and approval. Once the maps are approved, the dam owner must submit the map with the Emergency Action Plan to the California Office of Emergency Services (Cal OES) for review and approval. Dam inundation areas for these three dams are shown on Figure 4.9-4, *Dam Inundation Zones*.

San Andreas Dam is a 105-foot-high earthen embankment dam built in 1870 and located in the San Mateo Creek Watershed. It impounds San Andreas Reservoir, which provides water to almost one million customers in northern San Mateo County and San Francisco. Failure of this dam would result in released water flowing south and overtopping Lower Crystal Springs Dam, resulting in flooding in San Mateo. The dam is owned and operated by SFPUC and is classified as an extremely high hazard dam because it has the potential to impact highly populated areas and critical facilities or have short evacuation times. The seismic stability and hydraulic performance of the dam is currently being evaluated with extensive geotechnical investigations.

The Lower Crystal Springs Dam was constructed in 1888 as part of the Hetch Hetchy water system. It is a 149-foot-high gravity concrete dam owned and operated by the SFPUC and the reservoir impounds water which supplies San Francisco and most of the cities within San Mateo County. It is classified as an extremely high hazard dam but is listed as being in satisfactory condition. Although it is located adjacent to the San Andreas Fault, it survived the 1906 and 1989 earthquakes without any significant damage. The dam was inspected in 2010 and it was determined to be structurally sound and able to withstand an 8.3 magnitude earthquake. Based on this evaluation, the potential for dam failure is low.<sup>21</sup> Significant upgrades to the dam and nearby overpass bridge were completed between 2010 and 2015 to restore maximum storage capacity of the reservoir. The dam inundation area follows San Mateo Creek and spreads out near Hillsborough Park, inundating portions of Hillsborough, San Mateo, and Foster City.

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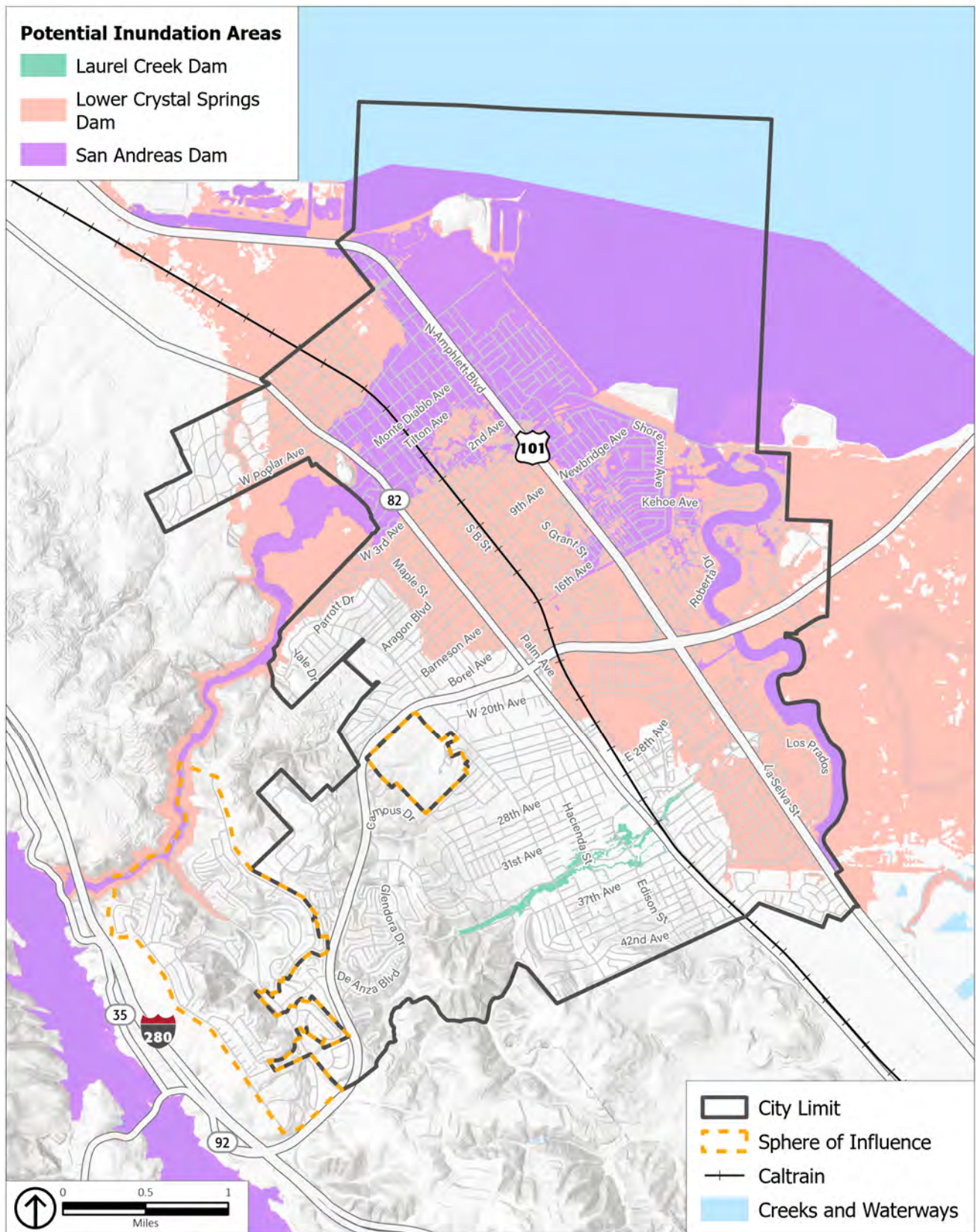
<sup>21</sup> City of San Mateo, 2017. Local Hazard Mitigation Plan.







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Source: Cal OES, 2023; PlaceWorks, 2023.

Figure 4.9-4  
Dam Inundation Zones

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Laurel Creek Dam was constructed in 1969; it is a 40-foot-high earth fill dam and is owned and operated by the City of San Mateo. It is located at the upstream end of Laurelwood Drive. The purpose of the dam is to control peak stormwater runoff from the upstream watershed and prevent flooding. Temporary retention by the dam reduces the peak stormwater flow rate of Laurel Creek from 600 cfs to 300 cfs and thereby controls the downstream flow. A 30-inch reinforced culvert at the base of the dam serves as the emergency spillway. The dam is classified as a high downstream hazard due to the potential to impact highly populated areas. However, the most recent DSOD reports indicate that the dam is structurally sound and will perform without failure during a major seismic event. The dam inundation zone follows Laurel Creek, spreads out near the Hillsdale Shopping Center, and extends into the neighborhood to the east.

There have been no dam failures in the City or County of San Mateo, other than the failure of a small dam in the community of El Granada in 1926.<sup>22</sup> However, there has been instances of Laurel Creek Dam and East Laurel Creek Dam being overtopped after heavy rainfall. The Laurel Creek Dam was overtopped in the 1970s, flooding a portion of the San Mateo Village neighborhood, and the East Laurel Creek Dam was overtopped in the 1980s, damaging homes immediately downstream.

There are no State or local restrictions for development in dam inundation zones; however, each dam owner is required to prepare an emergency action plan (EAP) and coordinate its response to a dam incident with local authorities. The San Mateo County Department of Emergency Management maintains copies of the most recent dam EAP and inundation maps and uses this information to plan notification for downstream areas in the event of a dam failure. Also, the San Mateo Office of Emergency Services, which is part of the San Mateo Consolidated Fire Department, manages and maintains emergency plans and training for City staff and the community.

### Sea Level Rise

According to OneShoreline, San Mateo County as a whole is the most vulnerable county in California to sea level rise because of its extensive coastline and Bay shoreline and the number of people and value of properties and critical assets in sea level rise-prone areas. Along the shoreline of the city, sea levels are projected to rise between 1.1 to 2.7 feet by 2050, with levels above 2 feet likely, and 3.4 to 10.2 feet by 2100 (depending on the scenario). However, it is possible that sea levels could rise faster than these projections. Figure 4.9-5, *Sea Level Rise 2050*, Figure 4.9-6, *Sea Level Rise 2050 + 100-Year Storm*, and Figure 4.9-7, *Sea Level Rise 2100*, display the expected sea level rise in San Mateo in 2050 (24 inches), sea level rise in San Mateo in 2050 with a 100-year storm, and sea level rise in San Mateo in 2100 (84 inches), respectively, based on guidance from the Ocean Protection Council's 2018 Updated California Sea Level Rise Guidance, featuring models from the Adapting to Rising Tides program of the San Francisco Bay Conservation and Development Commission (BCDC). These figures do not reflect the improvements currently underway for the Foster City levee system.

Rising sea levels can also cause the shoreline to flood more frequently and severely during storms or king tide events. King tides are abnormally high, predictable astronomical tides that occur about twice per

<sup>22</sup> San Mateo County, 2021. 2021 Multijurisdictional Local Hazard Mitigation Plan.



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year, with the highest tides occurring when the earth, moon, and sun are aligned. Because sea level rise will cause ocean levels to be higher during normal conditions, shoreline floods can reach further onto land. For example, a storm that has a one in five chance of occurring in a given year (known as a five-year storm) can create a temporary increase in sea levels of approximately 24 inches. The goals, policies, and actions in the proposed General Plan call for planning for a medium- to high-risk aversion scenario in 2100. This scenario uses a 1 in 200 chance for sea level rise projections, providing a precautionary projection that can be used for less adaptive (less able to make changes that reduce harm in response to hazards), more vulnerable developments or populations that will experience moderate to high consequences if actions are not taken to address sea level rise in these areas.

Rising sea levels may impact a portion of San Mateo's housing, commercial buildings, essential infrastructure, and economic drivers, as low-lying land near the shoreline could be subject to more frequent shoreline flooding. Affected essential infrastructure includes US Highway 101, State Route 92, and the Caltrain station and associated railroad infrastructure. Meanwhile, rising tides may increase groundwater levels, inundating contaminated soils. Given that some contaminated sites in San Mateo sit near the shoreline, rising groundwater may cause contaminated soils to leach into new, different areas.

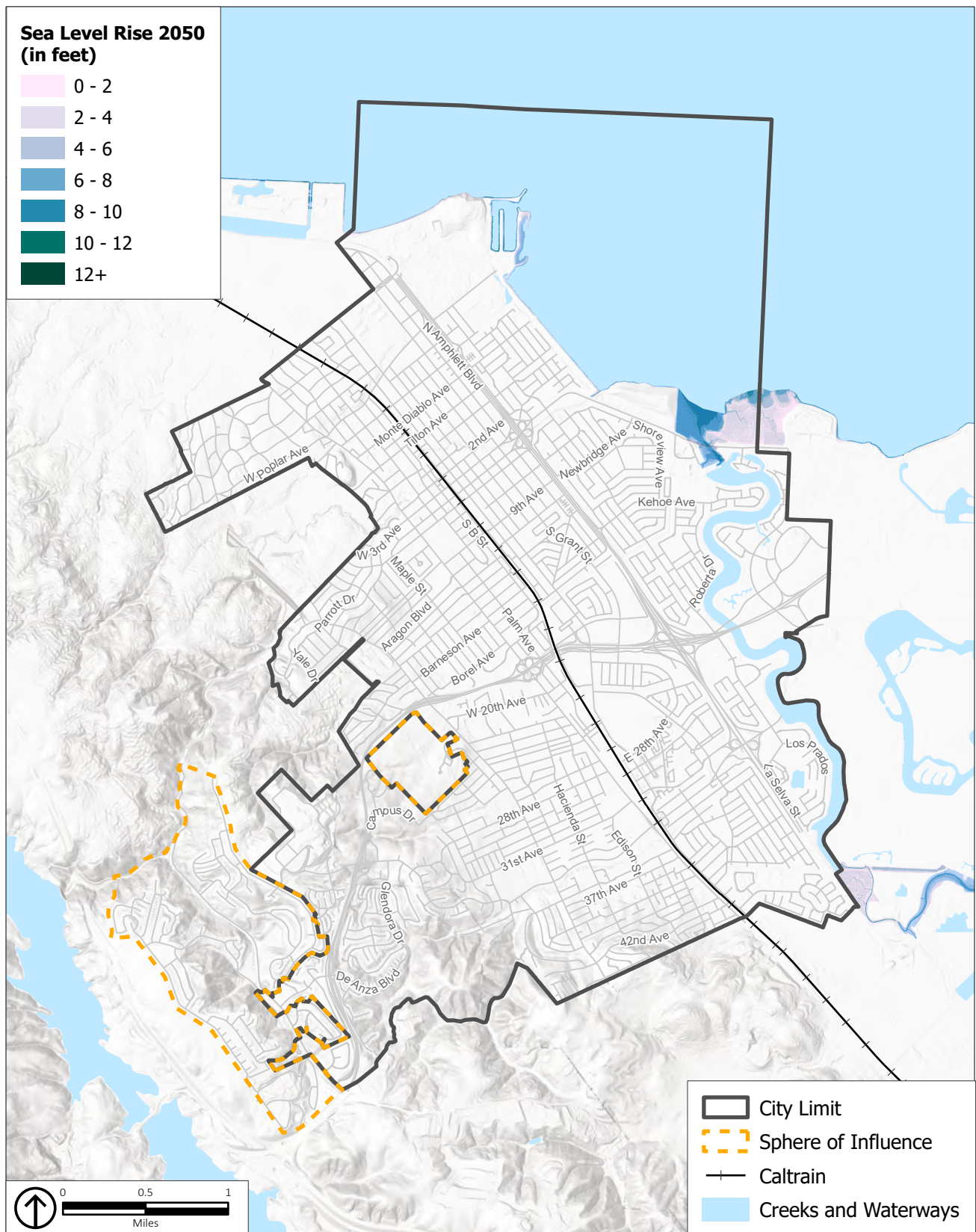
However, there is a levee system in place along the San Mateo shoreline and portions of San Mateo Creek and Marina Lagoon that provide protection from tidal flooding and sea level rise. As shown in Figure 4.9-2, *Potential Flood Hazards*, the portions of San Mateo south of San Mateo Creek are protected by FEMA accredited levees and are not within the 100-year floodplain. The Coyote Point Levee and the Bayfront Levee are not currently FEMA accredited and therefore the areas of San Mateo inland from the shoreline are in the 100-year floodplain. The City's Public Works Department has recently completed the North Shoreview Flood Improvement Project, which included raising a 1,300-foot levee segment, installing backup power generation, and increasing pumping capacity at the Coyote Point and Poplar Avenue Pump Stations.<sup>23</sup> The project documentation is being submitted to FEMA for review and it is anticipated that the levee system will be FEMA accredited and the, properties within the North Shoreview and North Central neighborhoods will be removed from the FEMA flood map as no longer within the 100-year floodplain. The levee system along San Mateo's shoreline provides a level of protection to residents and businesses from tidal flooding and sea level rise.

Additionally, to proactively address the potential impacts of sea level rise, the City of San Mateo is working with regional, State, and federal partners. The City regularly participates in data gathering and mapping; collaborates with OneShoreline; manages a new assessment district to fund necessary flood protection improvements; and completes infrastructure projects to provide flood protection. The City is also engaged through the BayCAN collaborative, a Bay Area-wide collaborative network of local governments and organizations focused on responding effectively and equitably to the impacts of climate change.

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<sup>23</sup> City of San Mateo, North Shoreview Levee and Pump Station Improvement Project, [https://www.cityofsanmateo.org/1794/FEMA-Flood-Zone-History#tab57a3dafb-bd81-4e8d-b78b-e9d88b335aea\\_0](https://www.cityofsanmateo.org/1794/FEMA-Flood-Zone-History#tab57a3dafb-bd81-4e8d-b78b-e9d88b335aea_0), accessed June 30, 2023.

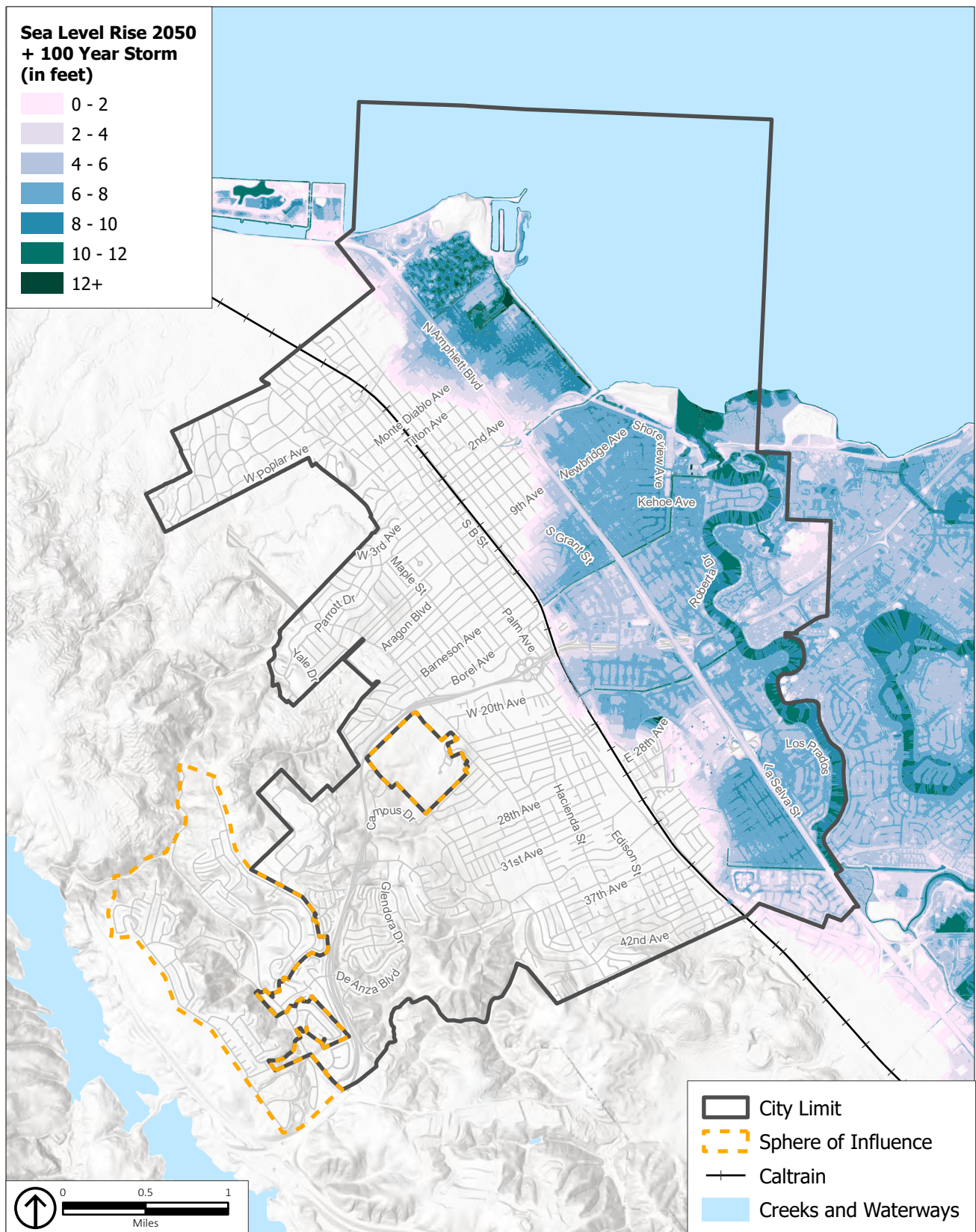
## HYDROLOGY AND WATER QUALITY



Source: PlaceWorks, 2023.

Figure 4.9-5  
Sea Level Rise 2050

## HYDROLOGY AND WATER QUALITY

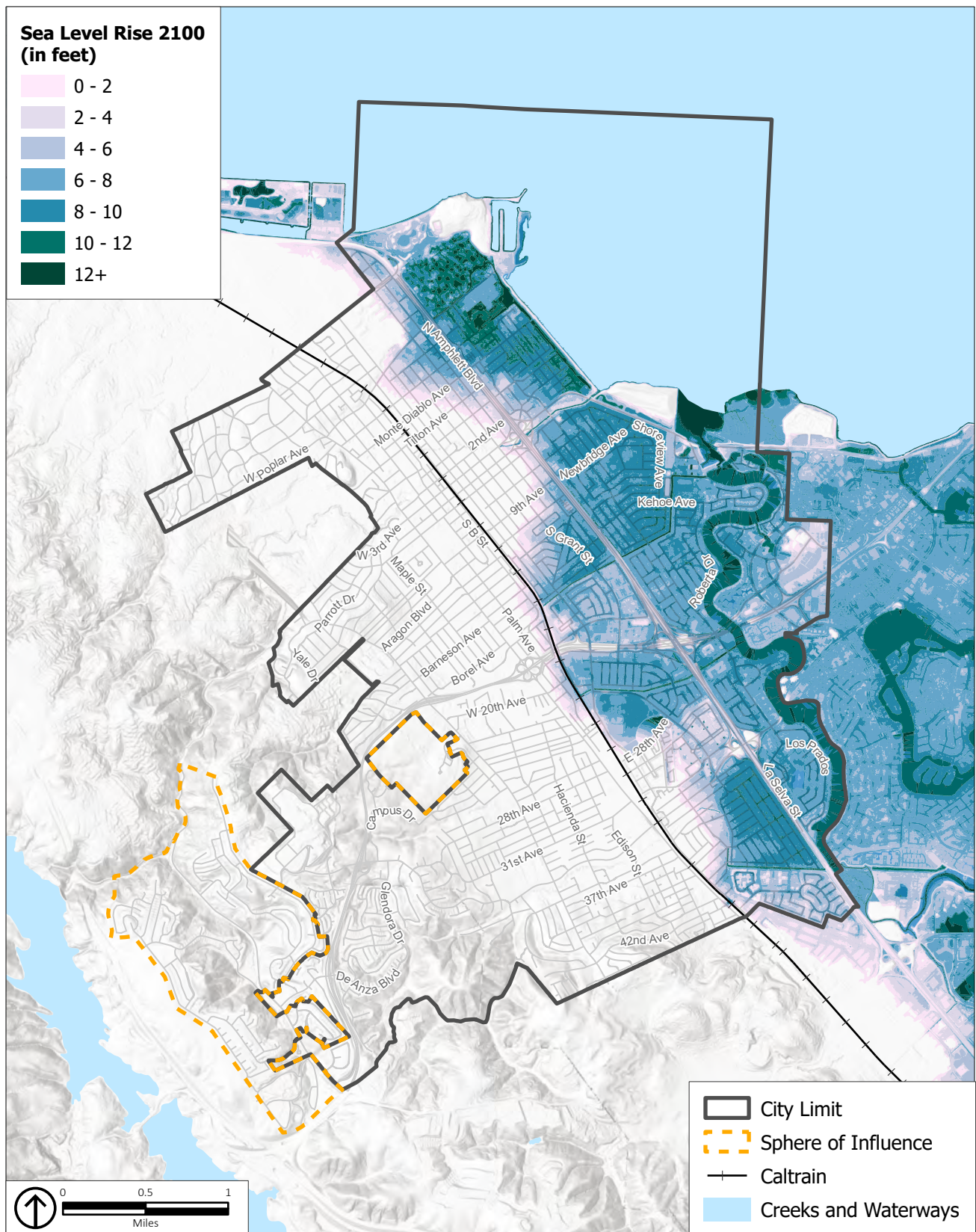


Source: PlaceWorks, 2023.

Figure 4.9-6  
Sea Level Rise 2050 + 100 Year Storm



## HYDROLOGY AND WATER QUALITY



Source: PlaceWorks, 2023.

Figure 4.9-7  
Sea Level Rise 2100

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### Tsunami

A tsunami is a series of traveling ocean waves generated by a rare, catastrophic event, including earthquakes, submarine landslides, and submarine or shoreline volcanic eruptions. Tsunamis can travel over the ocean surface at speeds of 400 to 500 miles per hour or more, and wave heights at the shore can range from inches to 50 feet. Factors influencing the size and speed of a tsunami include the source and magnitude of the triggering event, as well as off-shore and on-shore topography. A bayfront levee system currently protects portions of the city from high tides and waves; however, this could be overtopped by a tsunami.

Tsunamis that could potentially impact the city can result from offshore earthquakes in or around the Bay Area or from distant events. It is most common for tsunamis to be generated by offshore subduction faults such as those in Washington, Alaska, Japan, and South America. Tsunami waves generated by these distant sites can travel across the ocean or down the coast but would result in several hours of warning time. Local tsunamis could also result from offshore strike-slip faults with little warning time. However, the Bay Area faults that are off the Pacific coastline or under portions of San Francisco Bay are not likely to produce significant tsunamis because they move side to side rather than up and down, which is the displacement needed to create significant tsunamis. The greatest risk of a significant tsunami in the Bay Area is from tsunamis generated by earthquakes elsewhere in the Pacific. A tsunami originating in the Pacific Ocean would lose significant energy passing through San Francisco Bay.<sup>24</sup>

Although the Bay Area has experienced tsunamis in the past, they have not created significant damage. Most of the damage has occurred along the Pacific Coast. The 1964 Alaska earthquake resulted in wave heights of up to 1.1 meters along the San Francisco, Marin, and Sonoma County coastlines. The 2011 Magnitude 9.0 earthquake in Japan caused damage to marinas and ports in Santa Cruz and Crescent City, but no damage within San Francisco Bay.

The California Office of Emergency Services (CalOES) has developed tsunami evacuation maps, indicating areas that should evacuate given a tsunami warning. As shown on Figure 4.9-8, *Tsunami Evacuation Zones*, only the areas of San Mateo outside of the City's levee system are at risk for tsunamis, including the adjacent marshlands, tidal flats and former bay margin lands that are still at or below sea level. The likelihood of a major tsunami created by a Magnitude 9.1 offshore earthquake in Alaska causing flooding of the San Mateo bayfront area is very remote because a wave height of 20 feet at the Golden Gate Bridge would reach Coyote Point with a maximum runup of 5 feet at high tide. The largest tsunami in the last 120 years had a height of 7.4 feet at Golden Gate, causing a 2-foot runup along the San Mateo shoreline.<sup>25</sup>

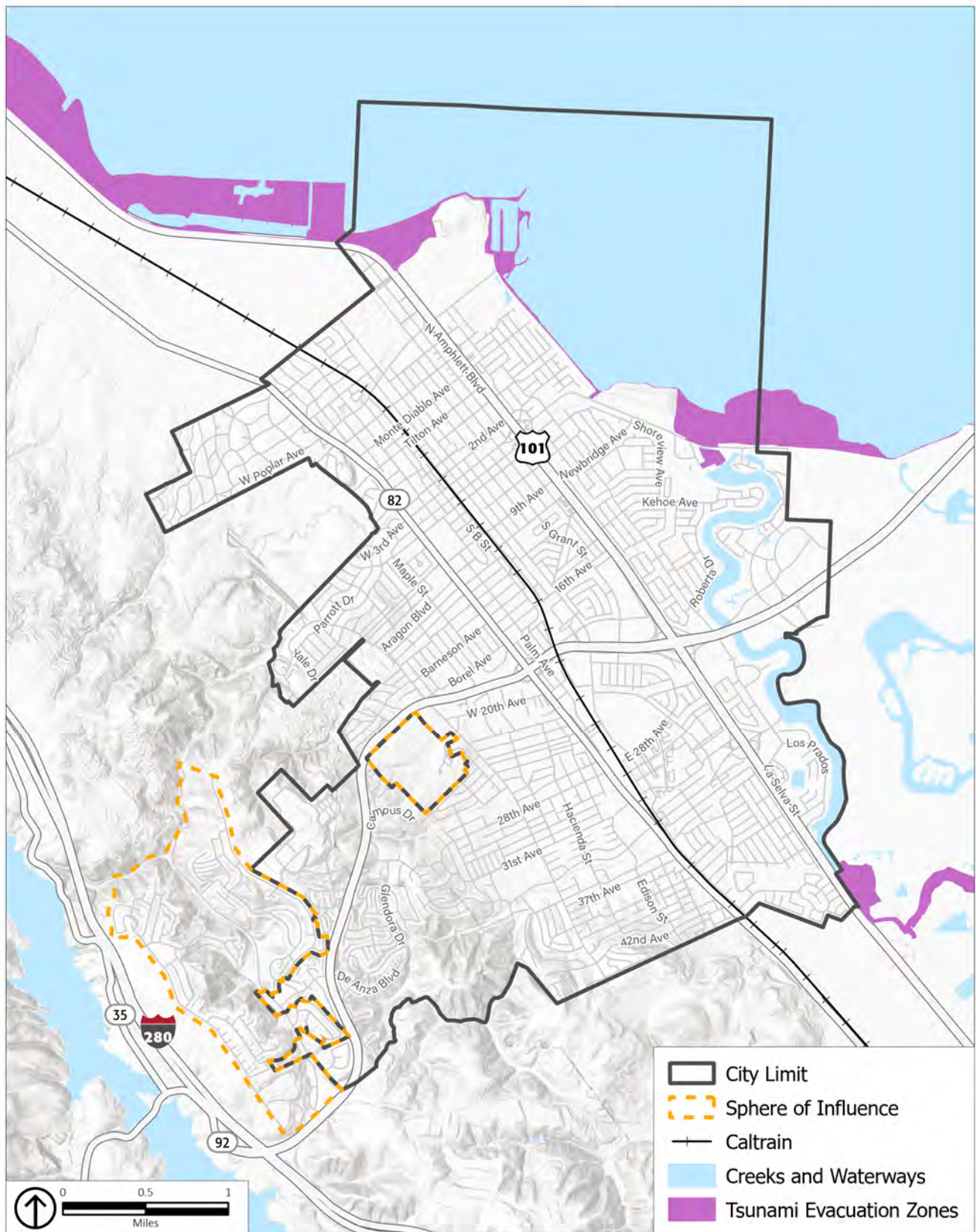
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<sup>24</sup> City of San Mateo, 2017, San Mateo Local Hazard Mitigation Plan.

<sup>25</sup> City of San Mateo, 2017, San Mateo Local Hazard Mitigation Plan.



## HYDROLOGY AND WATER QUALITY



Source: CGS, 2022; PlaceWorks, 2023.

Figure 4.9-8  
Tsunami Evacuation Zones



## HYDROLOGY AND WATER QUALITY

### Seiche

A seiche is an oscillation wave generated in a closed or partially closed body of water, which can be compared to the back-and-forth sloshing in a bathtub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, tsunamis, or landslides into the water body. Bodies of water such as bays, harbors, reservoirs, ponds, and swimming pools can experience seiche waves up to several feet in height during a strong earthquake. However, for a seiche to occur in San Francisco Bay, the wave frequency of a tsunami would have to match the resonance frequency of the Bay. The typical frequency of a tsunami is ten minutes to an hour, and the resonance frequency of San Francisco Bay is somewhere between one to ten hours. Therefore, tsunamis have frequencies too short to resonate within San Francisco Bay and a seiche is considered unlikely. There are no large bodies of water within the EIR Study Area that could trigger a seiche. Seiches associated with large bodies of water, such as Lake Tahoe and the Great Lakes are typically one foot high or less. Therefore, the probability that San Andreas, Lower Crystal Springs, or Laurel Creek Dams would be overtopped by a seiche is negligible since all of the reservoirs have a freeboard greater than one foot.

### 4.9.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant hydrology and water quality impact if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
3. 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 which would: i) result in a substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
6. In combination with past, present, and reasonably foreseeable projects, result in cumulative hydrology and water quality impacts in the area.

## HYDROLOGY AND WATER QUALITY

### 4.9.3 IMPACT DISCUSSION

<b>HYD-1</b>	<b>The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.</b>
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### Construction Impacts

Buildout under the proposed project would involve soil disturbance, construction, and operation of land uses that could generate pollutants affecting stormwater. Clearing, grading, excavation, and construction activities have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials, such as fuels, solvents, and paints, may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, future development that involves the disturbance of one acre or more of land would require compliance with the Construction General Permit (CGP) Order WQ 2022-0057-DWQ, which includes the preparation and implementation of a SWPPP. A SWPPP requires the incorporation of BMPs to control sediment, erosion, and hazardous materials contamination of runoff during construction and prevent contaminants from reaching receiving water bodies. The CGP also requires that prior to the start of construction activities, the project applicant must file PRDs with the SWRCB, which includes a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, and a SWPPP. The construction contractor is required to maintain a copy of the SWPPP at the site and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the issuance of a grading permit, the project applicant is required to provide proof of filing of the PRDs with the SWRCB. Categories of potential BMPs that would be implemented for the proposed project are described in Table 4.9-3, *Construction Best Management Practices*.

**TABLE 4.9-3 CONSTRUCTION BEST MANAGEMENT PRACTICES**

<b>Category</b>	<b>Purpose</b>	<b>Examples</b>
Erosion Controls and Wind Erosion Controls	<ul style="list-style-type: none"> <li>Use project scheduling and planning to reduce soil or vegetation disturbance (particularly during the rainy season)</li> <li>Prevent or reduce erosion potential by diverting or controlling drainage</li> <li>Prepare and stabilize disturbed soil areas</li> </ul>	Scheduling, preservation of existing vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextile and mats, wood mulching, earth dikes and drainage swales, velocity dissipation devices, slope drains, streambank stabilization, compost blankets, soil preparation/roughening, and non-vegetative stabilization
Sediment Controls	<ul style="list-style-type: none"> <li>Filter out soil particles that have been detached and transported in water</li> </ul>	Silt fence, sediment basin, sediment trap, check dam, fiber rolls, gravel bag berm, street sweeping and vacuuming, sandbag barrier, straw bale barrier, storm drain inlet protection, manufactured linear sediment controls, compost socks and berms, and biofilter bags

## HYDROLOGY AND WATER QUALITY

**TABLE 4.9-3 CONSTRUCTION BEST MANAGEMENT PRACTICES**

Category	Purpose	Examples
Wind Erosion Controls	<ul style="list-style-type: none"> <li>Apply water or other dust palliatives to prevent or minimize dust nuisance</li> </ul>	Dust control soil binders, chemical dust suppressants, covering stockpiles, permanent vegetation, mulching, watering, temporary gravel construction, synthetic covers, and minimization of disturbed area
Tracking Controls	<ul style="list-style-type: none"> <li>Minimize the tracking of soil offsite by vehicles</li> </ul>	Stabilized construction roadways and construction entrances/exits, and entrance/outlet tire wash
Nonstorm Water Management Controls	<ul style="list-style-type: none"> <li>Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment</li> <li>Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges</li> </ul>	Water conservation practices, temporary stream crossings, clear water diversions, illicit connection/discharge, potable and irrigation water management, and the proper management of the following operations: paving and grinding, dewatering, vehicle and equipment cleaning, fueling and maintenance, pile driving, concrete curing, concrete finishing, demolition adjacent to water, material over water, and temporary batch plants
Waste Management and Controls (i.e., good housekeeping practices)	<ul style="list-style-type: none"> <li>Manage materials and wastes to avoid contamination of stormwater</li> </ul>	Stockpile management, spill prevention and control, solid waste management, hazardous waste management, contaminated soil management, concrete waste management, sanitary/septic waste management, liquid waste management, and management of material delivery storage and use

Source: Compiled by PlaceWorks from information provided in the California Stormwater Quality Association's Construction BMP Handbook.

Submittal of the PRDs and implementation of the SWPPP throughout the construction phase of development pursuant to the proposed project will address anticipated and expected pollutants of concern from construction activities. Furthermore, as required in SMMC, Section 7.39.170, any construction project that involves land disturbance and requires a site development planning application must obtain a Stormwater Pollution Prevention Program Construction Permit from the Director of Public Works. In addition, the City complies with Section C.6, *Construction Site Control*, of the San Francisco MS4 permit and confirms implementation of appropriate BMPs with construction site inspections. As a result, water quality impacts associated with construction activities would be *less than significant*.

### Operational Impacts

Development and activities under the proposed project may result in long-term impacts to the quality of stormwater and urban runoff, subsequently impacting downstream water quality and/or San Francisco Bay. Developments can potentially create new sources for runoff contamination through changing land uses. As a consequence, developments within the EIR Study Area as a whole may have the potential to increase the post-construction pollutant loadings of certain constituent pollutants associated with the proposed land uses and their associated features, such as landscaping and plaza areas.

## HYDROLOGY AND WATER QUALITY

To help prevent long-term impacts associated with land use changes and in accordance with the requirements of the MS4 permit (Order No. R2-2022-0018) and the SMCWPPP C.3 Regulated Projects Guide, designated new development and significant redevelopment projects that involve the creation and/or replacement of 5,000 square feet or more of impervious surface must incorporate low impact development (LID) site design, source control, and stormwater treatment measures to address post-construction stormwater runoff. These regulated projects would be required to submit a Stormwater Control Plan (SCP) and C.3 and C.6 Development Review Checklist with building plans, to be reviewed and approved by the City of San Mateo.

In addition, projects that create and/or replace one acre or more of impervious surfaces and are located in a mapped susceptible area must comply with the hydromodification requirements specified in the C.3.g provisions of the MS4 permit. The hydromodification provisions require that post-project runoff rates and durations must match pre-project runoff rates and durations for ten percent of the 2-year peak flow up to the pre-project 10-year peak flow. In general, the western and southwestern portions of San Mateo are within the areas subject to hydromodification requirements.

All regulated projects are required to prepare an SCP that demonstrates that the project incorporates site design measures and treatment facilities that will:

- Minimize imperviousness
- Retain or detain stormwater
- Slow runoff rates
- Reduce pollutants in post-development runoff

In particular, the SCP would show that all runoff from impervious areas is either dispersed to landscape or routed to a properly designed LID treatment facility.<sup>26</sup> LID is an approach to land development (or redevelopment) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features and minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles, such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions.

Since the proposed project does not include specific development plans, SCPs are not required at this time. New development and redevelopment projects within the EIR Study Area would be required to prepare SCPs consistent with the guidance in the SMCWPPP C.3 Regulated Guide and the MS4 permit at the time of project application.

As part of the statewide mandate to reduce trash within receiving waters, the City is required to adhere to the requirements of the California Trash Amendments. The requirements include the installation and maintenance of trash screening devices at all public curb inlets, grate inlets, and catch basin inlets. The

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<sup>26</sup> SMCWPPP, 2020, C.3 Regulated Projects Guide.

## HYDROLOGY AND WATER QUALITY

trash screening devices must be certified trash full capture systems and must be installed on all inlets by 2030.

Additionally, all development under to the proposed project would be required to comply with the requirements of the SMMC, which prohibits illicit discharge into the storm drain system and includes policies to reduce the pollutants in stormwater (Section 7.39.120) and protect the water quality of watercourses (Section 7.39.130). All development that discharges storm water associated with industrial activity shall also comply with the requirements of the General Industrial Permit (Order No. 2014-0057-DWQ, last amended in 2018).

The proposed Conservation, Open Space, and Recreation (COS) and Public Services and Facilities (PSF) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider impacts to water quality. The following General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts on water quality and stormwater discharge:

- **Goal COS-1:** Protect and enhance the City’s natural resource areas that provide plant and animal habitat and benefit human and ecological health and resilience.
  - **Policy COS 1.8: Development Near Wetlands or Water.** Avoid wetlands development where feasible (as defined under California Environmental Quality Act [CEQA] Guidelines, Section 15364). Restrict or modify proposed development in areas that contain wetlands or waters to ensure the continued health and survival of special-status species and sensitive habitat areas. Development projects shall be designed to avoid impacts on sensitive resources, or to adequately mitigate impacts by providing on-site or off-site replacement at a higher ratio. Project design modification should include adequate avoidance measures, such as the use of setbacks, buffers, and water quality, drainage-control features, or other measures to ensure that no net loss of wetland acreage, function, water quality protection, and habitat value occurs. This may include the use of setbacks, buffers, and water quality, drainage-control features, or other measures to maintain existing habitat and hydrologic functions of retained wetlands and waters of the US.
  - **Policy COS 1.9: Wetland Development Mitigation.** If an applicant has demonstrated that wetlands avoidance is not feasible, provide replacement habitat on-site through restoration and/or habitat creation to ensure no net loss of wetland acreage, function, water quality protection, and habitat value. Allow restoration of wetlands off-site only when an applicant has demonstrated that on-site restoration is not feasible. Off-site wetland mitigation should consist of the same habitat type as the wetland area that would be lost.
- **Goal COS-3:** Protect and improve San Mateo’s creeks as valuable habitat and components of human and environmental health.
  - **Policy COS 3.1: Aesthetic and Habitat Values – Public Creeks.** Preserve and enhance the aesthetic and habitat values of creeks, such as San Mateo, Laurel, and Beresford Creeks, and other City-owned channels in all activities affecting these creeks, including revegetation, rewilding, erosion control, and adequate setbacks for structures.

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- **Policy COS 3.2: Aesthetic and Habitat Values – Private Creeks.** Encourage preservation and enhance the aesthetic and habitat values of privately owned sections of all other creeks and channels, shown in Figure COS-3 [of the proposed General Plan].
- **Policy COS 3.3: Groundwater Protection.** Support the County of San Mateo’s efforts to protect the quality and quantity of groundwater resources in the city.
- **Policy COS 3.4: Groundwater Infiltration.** Protect existing open spaces, natural habitat, floodplains, and wetland areas that allow for percolation and infiltration of stormwater runoff to slow and reduce the flow of runoff and improve water quality and identify areas to protect when considering new development.
- **Goal PSF-3:** Maintain sewer, storm drainage, and flood-control facilities adequate to serve existing needs, projected population, and employment growth and that provide protection from climate change risk.
  - **Policy PSF 3.6: Stormwater System.** Operate, upgrade, and maintain a stormwater drainage and flood-control system that safely and efficiently conveys runoff to prevent flooding and protect life and property; minimizes pollutants discharging to creeks and San Francisco Bay; manages stormwater as a resource and not a waste; and protects against the impacts of climate change.
  - **Policy PSF 3.7: Water Quality Standards.** Manage City creeks, channels, and the Marina Lagoon to meet applicable State and federal water quality standards. Protect and restore creeks to a level acceptable for healthy marine and bird habitat.
  - **Policy PSF 3.8: Stormwater Pollution Prevention.** In accordance with requirements in the Municipal Regional Stormwater Permit, implement programs, plans, and policies to ensure pollutants are minimized in stormwater runoff.
  - **Policy PSF 3.9: Low Impact Development.** Minimize stormwater runoff and pollution by encouraging low-impact design (LID) features, such as pervious parking surfaces, bioswales, and filter strips in new development.
  - **Policy PSF 3.10: New Creekside Development Requirements.** Require that new creekside development protect and improve setbacks, banks, and waterways adjacent to the development projects to increase flood protection and enhance riparian vegetation and water quality. Prevent erosion of creek banks.
  - **Policy PSF 3.11: Hydrologic Impacts of Creek Alteration.** Ensure that improvements to creeks and other waterways do not cause adverse hydrologic impacts, adversely affect adjacent properties, or significantly increase the volume or velocity of flow of the subject creek.
  - **Policy PSF 3.12: Levee System.** Continue to assess, maintain, and upgrade the City’s levee system. Collaborate with the Federal Emergency Management Agency, OneShoreline, and neighboring agencies to ensure adequate flood control and sea level rise protection.
  - **Actions PSF 3.13: City Infrastructure Studies and Master Plans.** Develop and coordinate studies and master plans to assess infrastructure and to develop a Capital Improvement Program for necessary improvements. Incorporate climate change risks, such as the impacts of droughts, increasing storm events, sea level rise, and groundwater changes in the planning process.



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- **Action PSF 3.14: Stormwater Treatment.** Continue to participate in the San Mateo Countywide Stormwater Pollution Prevention Program to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) permit to prevent water pollution from point and non-point sources.
- **Action PSF 3.15: Green Infrastructure.** Implement the City's Green Infrastructure Plan to gradually shift from a traditional stormwater conveyance system ("gray") to a more natural system that incorporates plants and soils to mimic watershed processes, capture and clean stormwater, reduce runoff, increase infiltration, and create healthier environments ("green").
- **Action PSF 3.16: Stormwater Pollution Prevention Education.** Partner with other agencies and organizations, such as Flows to Bay, to help inform residents and businesses of ways to protect water quality and prevent stormwater pollution.
- **Action PSF 3.17: Stormwater Requirements for Development.** In accordance with State regulatory mandates, require applicable new and redevelopment projects to incorporate site design, source control, treatment, and hydromodification management measures to minimize stormwater runoff volumes and associated pollutants. Stormwater management via green infrastructure systems shall be prioritized.
- **Action PSF 3.18: Incentives for Low-Impact Development.** Develop and implement incentives to encourage applicants to include low-impact design features in new development.

Implementation of the proposed General Plan goals, policies, and actions listed above, in conjunction with adherence to SMCWPPP and MS4 permit requirements, development under the proposed project would not violate any water quality standards or waste discharge requirements for both construction and operational phases, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>HYD-2</b>	<b>The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.</b>
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Implementation of the proposed project would result in a significant environmental impact if it would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. New development under the proposed project could result in an increase in impervious surfaces, thus reducing groundwater recharge.

### Groundwater Recharge

Development under the proposed project would be required to implement BMPs and LID measures—which include on-site infiltration—where feasible. The SMCWPPP guidance document and the MS4 Permit require site design measures, source control measures, LID standards, and hydromodification measures to be included in an SCP that must be submitted to and approved by the City. These measures minimize the

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impact of impervious areas by including pervious pavements, drainage to landscaped areas and bioretention areas, and the collection of rooftop runoff in rain barrels or cisterns for new development projects. These measures also increase the potential for groundwater recharge. In addition, groundwater within the EIR Study Area is not used by municipal water agencies and is limited in capacity and quality.

If construction dewatering is required with future development within the EIR Study Area, an application for a groundwater waste discharge permit must be completed and submitted to the City for review and approval. The applicant may be required to collect groundwater samples representative of the water quality anticipated in the discharge if construction dewatering occurs in an area of known or potential groundwater contamination. Construction dewatering could have a temporary effect on the shallow groundwater aquifer, but this effect would be limited in terms of the quantity of water withdrawn and the duration of the withdrawal. Therefore, construction dewatering would not result in a significant impact in terms of groundwater recharge.

### Groundwater Use

The groundwater basin that underlies most of the City of San Mateo is designated as a very low priority basin and therefore is not regulated under the Sustainable Groundwater Management Act. This is because there is very little groundwater use in this groundwater basin and it is mostly due to private well pumping in the areas south and outside of the city.

As discussed in Section 4.9.1.2, *Existing Conditions*, Cal Water and EMID supplies with water purchased from the SFPUC. The SFPUC's water supplies consist of surface water imported from the Sierra Nevada via the Hetch Hetchy Project and local surface water from the San Francisco Bay Region. Groundwater is not used for municipal water supply in the city.<sup>27</sup>

As discussed in impact discussion HYD-1, the Conservation, Open Space, and Recreation (COS) and Public Services and Facilities (PSF) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider impacts to water quality. The proposed General Plan goals, policies, and action listed in impact discussion HYD-1 would serve to minimize potential adverse impacts on groundwater. Specifically, proposed Policies COS 3.3, COS 3.4, and COS-5 require the City to support the County of San Mateo's efforts to protect the quality and quantity of groundwater resources in the city by protecting existing open spaces, natural habitat, floodplains, and wetland areas that allow for percolation and infiltration of stormwater runoff to reduce the flow of runoff and improve water quality, and protecting groundwater when considering new development projects. Proposed Action PSF 3.13 would require the City to develop and coordinate studies and master plans to assess infrastructure and to develop a Capital Improvement Program for necessary improvements and incorporate groundwater changes in the planning process.

<sup>27</sup> California Water Service, 2021, *2020 Urban Water Management Plan: Mid-Peninsula District*. [https://www.calwater.com/docs/uwmp2020/MPS\\_2020\\_UWMP\\_FINAL.pdf](https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf), accessed April 6, 2023.

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Future development under the project would not use groundwater supplies or interfere with groundwater recharge, and the proposed General Plan goals, policies, and actions would further protect groundwater; therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>HYD-3</b>	<b>The proposed project 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 which would: i) result in a substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows..</b>
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### Erosion and Siltation

New development or redevelopment within the EIR Study Area and changes in land use could result in an increase in impervious surfaces. This, in turn, could result in an increase in stormwater runoff, higher peak discharges to storm drains, and the potential to cause erosion or siltation in streams. Increases in tributary flows can exacerbate creek bank erosion or cause destabilizing channel incision.

All potential future development pursuant to the proposed project would be required to implement construction-phase BMPs as well as post-construction site design, source control measures, and treatment controls in accordance with the requirements of the CGP, the SMMC, the MS4 Permit, and the SMCWPPP C.3 Regulated Projects Guide. Typical construction BMPs include silt fences, fiber rolls, catch basin inlet protection, water trucks, street sweeping, and stabilization of truck entrance/exits. Each new development or redevelopment project that disturbs one or more acre of land would be required to prepare and submit a SWPPP to the SWRCB that describes the measures to control discharges from construction sites. In addition, any construction project within the City that involves land disturbance and requires a site development planning application must obtain a Stormwater Pollution Prevention Program Construction Permit from the Director of Public Works.

Once potential future development projects have been constructed, C.3 requirements in the MS4 permit for new development or redevelopment projects must be implemented and include site design measures, source control measures, LID, and treatment measures that address stormwater runoff and would reduce the potential for erosion and siltation. Site design measures include limits on clearing, grading, and soil compaction; minimizing impervious surfaces; conserving the natural areas of the site as much as possible; complying with stream setback ordinances; and protecting slopes and channels from erosion. LID measures include the use of permeable pavements, directing runoff to pervious areas, and the construction of bioretention areas. The SCP must also include operation and maintenance procedures and an agreement to maintain any stormwater treatment and control facilities for perpetuity. Adherence to the streambed alteration agreement process under Sections 1601 to 1606 of the California Fish and Game

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Code would further reduce erosion and siltation impacts that may occur due to streambed alterations. Projects subject to hydromodification must also maintain the pre-project creek erosion potential by implementing various control measures. Compliance with these regional and local regulatory requirements will ensure that erosion and siltation impacts from new development and redevelopment projects would be *less than significant*.

### Flooding On- or Off-Site

New development and/or redevelopment and changes in land uses could result in an increase in impervious surfaces, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause nuisance flooding in areas without adequate drainage facilities. However, all potential future development must comply with the requirements of the MS4 Permit and the SMCWPPP C.3 Regulated Projects Guide. Regulated projects must implement BMPs, including LID BMPs and site design BMPs, which effectively minimize imperviousness, retain or detain stormwater on-site, decrease surface water flows, and slow runoff rates. Projects that create and/or replace one acre of impervious surface must also adhere to the hydromodification requirements of the MS4 permit and the SMCWPPP document to ensure that post-project runoff does not exceed pre-project runoff for 10 percent of the 2-year to 10-year peak flow rates. Adherence to these regulatory requirements would minimize the amount of stormwater runoff from new development and redevelopment within the EIR Study Area. Therefore, future projects under the proposed project would not result in flooding on- or off-site, and impacts would be *less than significant*.

### Stormwater Drainage System Capacity

As stated in the impact discussions above, an increase in impervious surfaces with new development or redevelopment within the EIR Study Area could result in increases in stormwater runoff, which in turn could exceed the capacity of existing or planned stormwater drainage systems. All potential future development and redevelopment projects would be required to comply with the MS4 permit requirements and follow the SMCWPPP guidance document when designing on-site stormwater treatment facilities. The hydrology study and SCP for each project is subject to City review to verify that the on-site storm drain systems and treatment facilities can accommodate stormwater runoff from the site and would not exceed the capacity of downstream drainage systems at the point of connection. Also, implementation of the C.3 provisions of the MS4 permit for new development, which include LID design and bioretention areas, would minimize increases in peak flow rates or runoff volumes, thus reducing stormwater runoff to the storm drain system. Finally, as part of the permitting process, new development projects would be required to pay public utility fees, as per SMMC Chapter 7.39, which includes a Stormwater Pollution Prevention Program (STOPPP) Construction Permit and annual Stormwater Management Permit fees. The collected money is used to help finance improvements to the municipal storm drain system to accommodate increased flows.

Potential future development within the EIR Study Area would be mainly infill projects or the intensification of existing land uses and would be in developed urban areas with existing impervious surfaces and existing storm drain systems. With the implementation of the C.3 provisions for new projects within the EIR Study Area, there should not be a significant increase in impervious surfaces or stormwater runoff to the City's storm drain system.

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Further, new development and redevelopment within the EIR Study Area would not create substantial additional sources of polluted runoff. During the construction phase, projects would be required to prepare SWPPPs and implement erosion control plans, thus limiting the discharge of pollutants from the site. During operation, projects must implement BMPs and LID measures that minimize the amount of stormwater runoff and associated pollutants.

With implementation of these control measures and regulatory provisions to limit runoff from new development sites, the proposed project would not result in significant increases in runoff that would exceed the capacity of existing or planned storm drain facilities, and the impact is *less than significant*.

### Redirecting Flood Flows

The discussion above regarding on- and off-site flooding is also applicable to the analysis of impeding or redirecting flood flows. Since new development projects are required to comply with C.3 provisions of the MS4 Permit and retain stormwater on-site via the use of bioretention facilities, any flood flows would also be retained for a period of time on-site, which would minimize the potential for flooding impacts. Impact discussion HYD-4 discusses the potential for impeding or redirecting flood flows with development in areas within the 100-year floodplain. Based on these discussions, impacts related to impeding or redirecting flood flows would be *less than significant*.

The Safety (S) Element of the proposed General Plan provides guidance to help protect the community and mitigate potential impacts from natural and human-caused hazards. In addition to the proposed goals, policies, and actions identified in impact discussion HYD-1, the following General Plan 2040 goals, policies, and actions would minimize flood risks:

- **Goal S-1:** Minimize potential damage to life, environment, and property through timely, well-prepared, and well-coordinated emergency preparedness, response plans, and programs
  - **Policy S 1.1: Emergency Readiness.** Maintain the City's emergency readiness and response capabilities, especially regarding hazardous materials spills, natural gas pipeline ruptures, fire hazards, wildland fire risk, earthquakes, pandemics, and flooding. Focus primarily on areas identified by the City as underserved and most vulnerable to loss of life and property due to proximity to hazardous incidences, and work to ensure funding is available to these communities as a key component of emergency readiness
  - **Policy S 1.2: Local Hazard Mitigation Plan.** Incorporate by reference the San Mateo County Multi-jurisdictional Local Hazard Mitigation Plan, approved by the Federal Emergency Management Agency (FEMA) in 2021, along with any future updates or amendments, into this Safety Element in accordance with Government Code Section 65302.6.
  - **Policy S 1.3: Location of Critical Facilities.** Avoid locating critical facilities, such as hospitals, schools, fire, police, emergency service facilities, and other utility infrastructure, in areas subject to slope failure, wildland fire, flooding, sea level rise, and other hazards, to the extent feasible.
  - **Policy S 1.11: Evacuation Education.** Include information about safe and effective evacuation as part of natural disaster awareness, prevention, and community education and training efforts.

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Share information about how to prepare for evacuations, potential evacuation routes and shelter locations, how to receive notifications, and other relevant topics.

- **Policy S 1.12: Inclusive Outreach.** Notify the community of potential hazards affecting their neighborhood. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.
- **Action S 1.16: Evacuation Routes.** Maintain adequate evacuation routes as identified by arterial streets shown in the Circulation Element, Figure C-3 [of the proposed General Plan]. Evaluate each evacuation route's feasibility using a range of hazard criteria. Update this map on a regular basis to reflect changing conditions and State requirements for evacuation routes.
- **Action S 1.17: Regular Updates.** Update the Safety Element with each Housing Element update, or every eight years, as necessary, to meet State and local requirements.
- **Action S 1.18: Automatic and Mutual-Aid Agreements.** Participate in mutual-aid agreements with other local jurisdictions to provide coordinated regional responses, as necessary, to fire, flood, earthquake, critical incidents, and other hazard events in San Mateo and the surrounding area. Work with local jurisdictions to share resources and develop regional plans to implement disaster mitigation and resilience strategies, such as government continuity, emergency operations centers, and communications redundancies.
- **Action S 1.27: Emergency Notification System.** Develop an emergency notification system (e.g., SMC Alert and Nixle) for flood-prone neighborhoods and businesses before, during, and after a climate hazard event, to assist with evacuation and other support activities. This includes coordination with the San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline) on its early flood warning notification system.

With compliance with the MS4 permit, SMCWPPP requirements, and proposed General Plan goals, policies, and actions, potential future development would not result in substantial erosion or siltation and would not substantially increase the rate of surface runoff which would result in flooding, impede or redirect flood flows, or exceed the capacity of the drainage system. Impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>HYD-4</b>	<b>The proposed project would not, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.</b>
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### Pollutant Release in Flood Hazard Zones

Buildout pursuant to the proposed project could involve development of some projects in FEMA 100-year flood zones. As shown on Figure 4.9-2, *Potential Flood Hazards*, most of the land north of San Mateo Creek and east of US Highway 101 and limited areas along Laurel Creek, Borel Creek and Marina Lagoon are within the 100-year floodplain. A large area of the city west of Marina Lagoon is protected from flooding by levees and is outside of the 100-year floodplain.



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Future development under the proposed project in 100-year flood zones would be subject to floodplain requirements listed in SMMC Chapter 23.33. Prior to the start of construction or development within a Flood Hazard Area (i.e., 100-year floodplain), the City of San Mateo requires project applicants to obtain a development permit from the City's Floodplain Administrator and construct new development in accordance with the standards in SMMC Section 23.33.050. The standards of construction vary depending on whether the proposed structure is in a regular 100-year floodplain or in a coastal high hazard area. The standards of construction include provisions for flood risk reduction, including anchoring and flood-resistant materials and construction methods, with the lowest floors elevated above the base flood elevation or higher. OneShoreline recommends that new development be elevated 3 feet above the base flood elevation in areas that are impacted by sea level rise. Prior to occupancy of any building, a Letter of Map Revision (LOMR) and an elevation certificate must be provided to and approved by the City. Compliance with FEMA's National Flood Insurance Program requirements and SMMC requirements would reduce potential flood hazards and ensure that pollutants are not released during flood inundation.

Additionally, as discussed in Section 4.9.1.1, *Regulatory Framework*, the San Mateo Jurisdictional Annex of the MJHMP includes hazard mitigation actions to help reduce the risk of damage or injury from floods. These actions include continued implementation of floodplain management measures, incorporation of FEMA guidelines into the planning process, assessment and mitigation of urban drainage flooding.

### Pollutant Release in Dam Inundation Zones

As shown in Figure 4.9-4, *Dam Inundation Zones*, areas of San Mateo are within the inundation zones of the San Andreas Dam, Lower Crystal Springs Dam, and Laurel Creek Dam. The probability of dam failure is very low, and San Mateo has never been impacted by a major dam failure. In addition, dam owners are required to maintain emergency action plans (EAPs) that include procedures for damage assessment and emergency warnings. An EAP identifies potential emergency conditions at a dam and specifies preplanned actions to help minimize property damage and loss of life should those conditions occur. EAPs contain procedures and information that instruct dam owners to issue early warning and notification messages to downstream emergency management authorities, such as the City's Office of Emergency Services. Because the likelihood of catastrophic dam failure is very low, impacts related to the release of pollutants due to dam inundation are not considered to be significant.

### Pollutant Release from Tsunami

Given the history of tsunamis in the San Francisco Bay Area, the risk of flooding due to a tsunami event is considered to be unlikely for the City of San Mateo.<sup>28</sup> Tsunami hazards in San Francisco Bay are much smaller than along the Pacific Coast because the bays are enclosed body of waters. However, as shown on Figure 4.9-8, *Tsunami Evacuation Zones*, some areas along the San Mateo shoreline are within the mapped tsunami inundation zones.

Due to the infrequent nature of tsunamis and relatively low predicted tsunami wave height in the area, the City is reasonably safe from tsunami hazards. Furthermore, SMMC Chapter 23.33 includes

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<sup>28</sup> City of San Mateo, 2017. San Mateo Local Hazard Mitigation Plan.

## HYDROLOGY AND WATER QUALITY

requirements for development within coastal high-hazard areas, which includes tsunami zones. Also, a bayfront levee protects a large portion of the city from high tides and waves. Although the lower elevation portions of the levees could be overtopped by a tsunami, the potential for significant damage is low given the very low probability of a tsunami impacting the city.

In addition, there are various precautions and warning systems that would be implemented by the City in the event of a tsunami. The City uses an automated telephone and text message system (SMC Alert) that can notify affected portions of the community when emergency alerts or notifications are needed. Also, the National Oceanic and Atmospheric Administration operates the National Tsunami Warning Center and the Pacific Tsunami Warning Center that alert local authorities to order the evacuation of low-lying areas, if necessary. As discussed previously in Section 4.9.1, *Environmental Setting*, the probability of a seiche occurring that would cause flooding and the release of pollutants is negligible.

### Pollutant Release Due to Sea Level Rise

As discussed in the Flood Hazard discussion above, potential development under the proposed project involves development in areas that will be inundated by sea level rise and associated coastal flooding. As shown on Figure 4.9-5 through Figure 4.9-7, most of the city east of the railroad tracks is projected to be impacted by sea level rise by 2100.

The City is a member of OneShoreline, which is working to build solutions to the climate change impacts of sea level rise, flooding, and coastal erosion. Potential adaptation measures include elevating structures to account for sea level rise, shoreline setbacks, disclosure requirements, raising shoreline levees and floodwalls, and raising roadways to maintain evacuation routes.

Future development under the proposed project within 100 feet of San Francisco Bay shoreline would be subject to review and approval by the BCDC. Future large shoreline projects, including shoreline protection projects, would be required to conduct a sea level rise risk assessment and be designed to be resilient to a midcentury sea level rise projection. BCDC requires that, if it is likely that the project will remain in place longer than midcentury, an adaptive management plan be developed to address the long-term impacts that will arise, based on the risk assessment. Potential new development under the proposed project more than 100 feet inland from San Pablo or San Francisco Bay shoreline would not be subject to BCDC review. However, future development would be required to comply with SMMC Chapter 23.33, which restricts development in floodable areas and requires protection for new development within inundation areas.

Sea level rise is also expected to raise groundwater levels, inundating contaminated soils. Given that some contaminated sites in San Mateo sit near the shoreline, rising groundwater associated with sea level rise may cause release of pollutants.

Sea level rise and associated groundwater rise are considered to be an effect of the environment on the project. As explained in Chapter 4, *Environmental Analysis*, of this Draft EIR, the California Supreme Court has determined that the evaluation of the significance of project impacts under CEQA should focus on the potential impacts of the proposed project on the environment, including whether the proposed project may exacerbate any existing environmental hazards. Sea level rise is an existing environmental hazard in

## HYDROLOGY AND WATER QUALITY

San Mateo. The discussion in this section explains the potential of the proposed project to exacerbate impacts from sea level rise. However, the effects of sea level rise on the proposed project are not subject to CEQA review following the *California Building Industry Association vs. Bay Area Air Quality Management District* (CBIA vs. BAAQMD) case.<sup>29</sup> Therefore, this EIR does not make a finding regarding level of impact from sea level rise.

### Summary

The proposed General Plan goals, policies, and actions listed in impact discussions HYD-1 and HYD-3 address the potential for flooding, dam inundation, and tsunamis. In conjunction with the implementation of the City's floodplain management requirements, coordination with OneShoreline, and activation of the City's emergency response system in the case of a dam failure or tsunami, the potential impact that there would be a release of pollutants from flooding, tsunamis, or seiches would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>HYD-5</b>	<b>The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.</b>
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Adherence to the State CGP, the SMMC, the MS4 Permit, and the SMCWPPP guidance document would ensure that surface and groundwater quality are not adversely impacted during construction and operation of development pursuant to the proposed project. As a result, future development would not obstruct or conflict with the implementation of the San Francisco Bay Basin Water Quality Control Plan. Also, potential future development would be served by either CalWater or EMID, which rely solely on surface water supply. Groundwater is not currently used or planned to be used as a municipal water supply source, and the groundwater basin that includes the City of San Mateo is not regulated under the Sustainable Groundwater Management Act, because of very limited groundwater use, and is not required to prepare a groundwater sustainability plan. Therefore, the proposed project would not obstruct or conflict with the RWQCB's Basin Plan or a groundwater management plan, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>HYD-6</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative hydrology and water quality impacts in the area.</b>
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The geographic context used for the cumulative assessment to hydrology, drainage, flooding, and water quality encompasses the watersheds within the EIR Study Area, as shown on Figure 4.9-1, *San Mateo Watersheds*. New development in these watersheds could increase impervious areas, thus increasing

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<sup>29</sup> *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369.

## HYDROLOGY AND WATER QUALITY

runoff and flows into the storm drainage systems. Potential future development would be required to comply with the MS4 Permit, implement BMPs that direct drainage to landscaped areas, and integrate bioretention facilities into the site design. Implementation of these BMPs on a regional basis would reduce cumulative impacts to hydrology and drainage to *less than significant*.

All projects would be required to comply with the SMMC and various water quality regulations that control construction-related and operational discharge of pollutants into stormwater. The water quality regulations implemented by the San Francisco Bay RWQCB take a basinwide approach and consider water quality impairment in a regional context. For example, the NPDES Construction Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the MS4 Permit encompasses all of the surrounding municipalities to manage stormwater systems and be collectively protective of water quality. Projects in these watersheds would implement structural and nonstructural source-control BMPs that reduce the potential for pollutants to enter runoff, and treatment control BMPs that remove pollutants from stormwater. Therefore, cumulative water quality impacts would be *less than significant* after compliance with these permit requirements, and impacts would not be cumulatively considerable.

Projects in the watersheds may be constructed within 100-year flood zones, areas of sea level rise, or tsunami inundation zones. Projects within the 100-year flood zone would be mandated to purchase flood insurance through the National Flood Insurance Program. Projects within tsunami zones and areas subject to sea level rise may also purchase voluntary flood insurance through this program. In addition, other jurisdictions within these watersheds regulate development within flood zones in a similar manner as SMMC Chapter 23.33 and in compliance with FEMA standards to limit cumulative flood hazard impacts. Therefore, cumulative impacts to hydrology, drainage, and flooding would be *less than significant*, and impacts of the proposed project would not be cumulatively considerable.

**Significance without Mitigation:** Less than significant.

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## 4.10 LAND USE AND PLANNING

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential land use and planning impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP), and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.10.1 ENVIRONMENTAL SETTING

#### 4.10.1.1 REGULATORY FRAMEWORK

##### State Regulations

###### *Cortese-Knox Act*

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000<sup>1</sup> established a Local Agency Formation Commission (LAFCo) in each county in California, and authorized these commissions to review, approve, or deny proposals for boundary changes and incorporations for cities, counties, and special districts. The LAFCo established a “sphere of influence” (SOI) for cities within their jurisdiction that describes the city's probable future physical boundaries and service area. The San Mateo SOI is regulated by San Mateo’s County LAFCo. The San Mateo SOI is shown on Figure 3-2, *EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR. The City does not propose to annex or de-annex any areas of the SOI as part of the proposed project.

###### *Housing Opportunity and More Efficiency Act*

The Housing Opportunity and More Efficiency (HOME) Act (Senate Bill [SB] 9) was signed in September 2021 and went into effect in January 2022. The HOME Act streamlines the process for a homeowner to create a duplex or subdivide an existing lot, with the effect of legalizing fourplexes in areas that previously only allowed one home.<sup>2</sup> To be eligible for the streamlining process under the HOME Act, a parcel must meet a specific list of qualifications that protects historic districts, preserves the environmental quality and visual characteristics of communities, and prevents tenants from being displaced. Homeowners would still be required to comply with local zoning requirements, such as, but not limited to, height, floor area ratios, and lot coverage, when developing a duplex as long as they do not physically preclude a duplex.

<sup>1</sup> California Government Code, Sections 56000–56001.

<sup>2</sup> California Senate, SB 9 (Atkins): The California H.O.M.E. Act, <https://focus.senate.ca.gov/sb9>, accessed May 25, 2023.



## LAND USE AND PLANNING

### *State Density Bonus Law*

The State Density Bonus Law (California Government Code Sections 65915-65918) encourages the development of affordable and senior housing, including an increase in project densities depending on the amount of affordable housing provided. Cities and counties are required to grant a density bonus and other incentives or concessions to housing projects which contain one of the following:

- At least 5 percent of the housing units are restricted to very low income residents.
- At least 10 percent of the housing units are restricted to lower income residents.
- At least 10 percent of the housing units in a for-sale common interest development are restricted to moderate income residents.
- 100 percent of the housing units (other than manager's units) are restricted to very low, lower and moderate income residents (with a maximum of 20 percent moderate).
- At least 10 percent of the housing units are for transitional foster youth, disabled veterans or homeless persons, with rents restricted at the very low income level.
- At least 20 percent of the housing units are for low income college students in housing dedicated for full-time students at accredited colleges.
- The project donates at least one acre of land to the city or county for very low income units, and the land has the appropriate general plan designation, zoning, permits and approvals, and access to public facilities needed for such housing.
- The project is a senior citizen housing development (no affordable units required).
- The project is a mobile home park age-restricted to senior citizens (no affordable units required).

The City of San Mateo has adopted the State Density Bonus law by reference in Chapter 27.15, *Density Bonus*, in its Municipal Code.

## Regional Regulations

### *Plan Bay Area*

*Plan Bay Area* is the regional transportation plan/sustainable community strategy, as mandated by the Sustainable Communities and Climate Protection Act (SB 375). *Plan Bay Area* lays out a development scenario for the nine-county Bay Area region that works to align transportation and land use planning in order to reduce vehicle miles traveled through modified land use patterns. The current *Plan Bay Area* projects growth and development patterns through 2050 and was recently adopted in October 2021.<sup>3</sup>

*Plan Bay Area* is prepared and regularly updated by the Metropolitan Transportation Commission (MTC) in partnership with the Association of Bay Area Governments (ABAG), Bay Area Air Quality District

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<sup>3</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed August 9, 2022.

## LAND USE AND PLANNING

(BAAQMD), and the Bay Conservation and Development Commission (BCDC). Each of the agencies has a different role in regional governance. ABAG primarily does regional land use planning, housing, environmental quality, and economic development; MTC is tasked with regional transportation planning, coordinating, and financing; BAAQMD is responsible for regional air pollution regulation; and BCDC's focus is to preserve, enhance, and ensure responsible use of the San Francisco Bay.

As described in Chapter 4, *Environmental Analysis*, of this Draft EIR, *Plan Bay Area* designates Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) throughout the region. PDAs are areas along transportation corridors which are served by public transit that allow opportunities for development of transit-oriented, infill development within existing communities that are expected to host the majority of future development. TPAs are similar in that they are formed within one-half mile around a major transit stop such as a transit center or rail line. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4, the EIR Study Area has four PDAs and a TPA. The PDAs include Grand Boulevard Initiative, Downtown, Rail Corridor, and El Camino Real PDAs. The TPA surrounds El Camino Real and the three Caltrain stations (San Mateo, Hayward Park, and Hillsdale) in San Mateo.

*Plan Bay Area 2050* distributes projected future growth across the San Francisco Bay Area region in order to meet its GHG emissions reduction, housing, and other performance targets, but it is not intended to override local land use control. Cities and counties, not MTC/ABAG, are ultimately responsible for the manner in which their local communities continue to be built out in the future. For this reason, cities and counties are not required to revise their land use policies and regulations, including general plans, to be consistent with the regional transportation plan or an alternative planning strategy. Rather than increase regional land use control, *Plan Bay Area 2050* facilitates implementation by expanding incentives and opportunities available to local jurisdictions to support growth in PDAs. In addition to funding transportation and planning projects in PDAs, *Plan Bay Area 2050* sets the stage for cities and counties to increase the efficiency of the development process, if they choose, for projects consistent with *Plan Bay Area* and other state legislation.<sup>4</sup>

### *Airport Land Use Compatibility Plan*

The Airport Land Use Compatibility Plan (ALUCP) covering all three public airports in San Mateo County was approved by the City/County Association of Governments of San Mateo County (C/CAG) in December 1996. C/CAG is the Airport Land Use Commission (ALUC) responsible for promoting land use compatibility around the County's airports in order to minimize public exposure to excessive noise and safety hazards. C/CAG has since adopted updated ALUCPs for San Francisco International Airport (November 2012), Half Moon Bay Airport (September 2014), and San Carlos Airport (October 2015).<sup>5</sup> The updated ALUCPs describe a series of land use safety and compatibility zones and associated guidelines for development around each airport that are intended to prevent development that is incompatible with airport operations. These regulations include height restrictions based on proximity to

<sup>4</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, 2022, Frequently Asked Questions: Does *Plan Bay Area* override local land use control?, <https://www.planbayarea.org/2040-plan/quick-facts/faq-page#n4851>, accessed August 31, 2022.

<sup>5</sup> City/County Association of Governments of San Mateo County, 2022, Airport Land Use, <https://ccag.ca.gov/plansreportslibrary-2/airport-land-use/>, accessed October 3, 2022.

## LAND USE AND PLANNING

the airport and flight patterns. The ALCUPs delineate two Airport Influence Areas (AIA), Area A and Area B, within proximity to each airport. The EIR Study Area is located within the San Carlos Airport and San Francisco International Airport AIAs. As a requirement for development located in Area A, the presence of existing airports within two miles of the property must be disclosed in the notice of intention to offer the property for sale. For development located within Area B of the AIA, the C/CAG Board shall exercise its statutory duty to review proposed land development proposals, among other plans, ordinances, amendments, and actions.

### Local Regulations

#### *San Mateo General Plan*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to land use and planning are primarily in the Land Use, Housing, and Urban Design Elements. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.10.3, *Impact Discussion*.

#### *Measure Y*

Approved in November 2020, this measure extended the expiration date of General Plan policies that limited building heights, densities, and intensities to December 2030. These limits were originally established by Measure H, passed in 1991, and continued by Measure P, passed in 2004. On top of this date extension, Measure Y also broadens the inclusionary housing ordinance to apply to rental housing projects. This law requires developers of rental projects to either provide off-site construction of units or other alternative means of compliance with the inclusionary housing requirement. This measure does not permit the payment of in-<sup>6</sup> [OBJ]

#### *City of San Mateo Municipal Code*

The San Mateo Municipal Code (SMMC) includes various directives pertaining to land use and planning. The SMMC is organized by title, chapter, and section, and in some cases, articles. Provisions related to land use and planning impacts are included in Title 27, *Zoning*.

The primary purpose of the Zoning Code is to promote and protect the public health, safety, morals, comfort, and general welfare of the City of San Mateo, with specific purposes listed under Section 27.02.020, *Intent - Purpose*. The Zoning Code is the mechanism used to implement the land use goals, policies, and actions of the General Plan and to regulate all land use in the city. The Zoning Code describes zoning designations and contains the zoning map and development standards for the zoning designations.

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<sup>6</sup> City of San Mateo, May 2022, Agenda, <https://sanmateo.primegov.com/Public/CompiledDocument?meetingTemplateId=5854&compileOutputType=1>, accessed August 17, 2022.

## LAND USE AND PLANNING

### *Other City Land Use Plans*

All specific plans, area plans, master plans, or similar plans—such as the CAP or a hazard mitigation plan—and zoning in the city must be consistent with the General Plan. The following describes some of the other key plans that guide development in San Mateo.

- **Hillsdale Station Area Plan:** In April 2011, the *Hillsdale Station Area Plan* was adopted. This plan provides the regulatory framework for compact and sustainable development in the area surrounding the Hillsdale Caltrain Station.<sup>7</sup> This plan’s study area is around 150 acres and does not include the Bay Meadows Phase II project areas.
- **Downtown Area Plan.** In May 2009, the City of San Mateo approved the *Downtown Area Plan*.<sup>8</sup> The study area is around 70 blocks, and the plan provides a framework for future decision making on private development projects. One overarching goal of the plan is to enhance the Downtown’s role as a city center by improving the pedestrian environment, creating adequate parking, and increasing mixed-use buildings.
- **San Mateo Rail Corridor Transit Oriented Development Plan.** The *San Mateo Rail Corridor Transit Oriented Development Plan*, adopted June 2005, lays the framework for creating transit-oriented development (TOD) within a half mile of the Hillsdale and Hayward Park Caltrain station area.<sup>9</sup> This plan also encourages improving street systems and pedestrian friendliness at other locations in the plan area.
- **Bay Meadows Specific Plan (Phase II):** Adopted in November 2005, the Bay Meadows Specific Plan Amendment is an outgrowth of a multi-year corridor planning process. This plan proposes that the Main Track area be redeveloped with residential, commercial and retail uses, and for the existing racing related uses to continue in the interim.<sup>10</sup>
- **Bay Meadows Specific Plan (Phase I):** In April 1997, the *Bay Meadows Specific Plan* was adopted and later amended in 2002, 2005 and 2010. The area of the plan is the Bay Meadows Race Track and the adjacent U.S. Route 101/Hillsdale Boulevard interchange, a land area of approximately 170 acres not including the interchange Hillsdale Station Area Plan.<sup>11</sup> This plans provides the framework for improvements to the Main Track Area, a new corporate office campus, and a new mixed-use residential and commercial neighborhood within the planning area.

<sup>7</sup> City of San Mateo, April 2011, *Hillsdale Station Area Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/59484/Hillsdale-Station-Area-Plan?bidId=>, accessed on July 11, 2023.

<sup>8</sup> City of San Mateo, May 2009, *Downtown Area Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/55327/2009-Downtown-Area-Plan?bidId=>, accessed August 19, 2022.

<sup>9</sup> City of San Mateo, June 6, 2005, *San Mateo Rail Corridor Transit Oriented Development Plan*, <https://www.cityofsanmateo.org/1899/Rail-Corridor-Transit-Oriented-Developme>, accessed August 11, 2022.

<sup>10</sup> City of San Mateo, November 2005, *Bay Meadows Specific Plan Amendment Phase II*, <https://www.cityofsanmateo.org/DocumentCenter/Index/271>, accessed on July 13, 2023.

<sup>11</sup> City of San Mateo, April 1997, *Bay Meadows Specific Plan*, <https://www.cityofsanmateo.org/DocumentCenter/Index/2612>, accessed on July 11 2023.

## LAND USE AND PLANNING

- **El Camino Real Master Plan.** In 2001, the *El Camino Real Master Plan* was adopted by the San Mateo City Council.<sup>12</sup> The plan lays out the framework for development occurring from State Route 92 (SR-92) to the Belmont City border. Building heights and intensities are further defined in the plan. Some improvements mentioned in the plan include increasing the number of public transit stops and installing a gateway to add a sense of place to the area. Other improvements discussed involved adding more trees, benches, and detailed building finishes to upgrade the pedestrian environment.
- **Detroit Drive Specific Plan.** Adopted in April 1984 and last amended in June 1990, the *Detroit Drive Specific Plan* outlines the framework for development in the Detroit Drive Area.<sup>13</sup> This area is intended for a variety of commercial development such as warehousing, processing, recreational vehicle storage and limited general offices.
- **Mariner's Island Specific Plan.** The City adopted the *Mariner's Island Specific Plan* in June 1973 and last revised it in May 1995.<sup>14</sup> This plan provides developmental framework for Mariner's Island and is intended to ensure that Mariners Island remains a high-quality area.
- **Shoreline Parks Specific Plan.** The *Shoreline Park Specific Plan* was adopted in May 1971 and was last revised in July 1990.<sup>15</sup> The plan area extends from Burlingame to the north to Foster City to the south. One of the main goals of the *Shoreline Parks Specific Plan* is to provide as much public access to the shoreline as possible. Included in the plan are recreation areas along the shoreline that include bikeways, trails, fishing spots, and vista points.

### 4.10.1.2 EXISTING CONDITIONS

This section describes the existing 2030 General Plan land use designations and Zoning Districts in the EIR Study Area.

#### Land Use Designations

The 2030 General Plan land use designations and their distribution are illustrated in Figure 3-4, *Current General Plan Land Use Map*, in Chapter 3, *Project Description*, of this Draft EIR. Land use designations represent the intended future use of each parcel of land and are intended to provide a vision of the future organization of uses within the SOI and a flexible structure to allow for changes in economic conditions, community visions, and environmental conditions. As described in Chapter 3, the proposed project would amend the City's land use designations.

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<sup>12</sup> City of San Mateo, September 2001, *El Camino Real Master Plan*, [cityofsanmateo.org/DocumentCenter/View/5111/0-Executive-Summary?bidId=](https://www.cityofsanmateo.org/DocumentCenter/View/5111/0-Executive-Summary?bidId=), accessed August 19, 2022.

<sup>13</sup> City of San Mateo, April 1984, *Detroit Drive Specific Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/64607/Detroit-Drive-Specific-Plan---last-updated-1990#:~:text=The%20Detroit%20Drive%20Specific%20Plan,to%20insure%20compatibility%20of%20development.,> accessed August 19, 2022.

<sup>14</sup> City of San Mateo, revised May 1995, *Mariner's Island Specific Plan*, [cityofsanmateo.org/DocumentCenter/View/64608/Mariners-Island-Specific-Plan-SCANNED](https://www.cityofsanmateo.org/DocumentCenter/View/64608/Mariners-Island-Specific-Plan-SCANNED), accessed August 19, 2022.

<sup>15</sup> City of San Mateo, revised July 1990, *Shoreline Park Specific Plan*, [cityofsanmateo.org/DocumentCenter/View/2486/Shoreline-Park-Specific-Plan?bidId=](https://www.cityofsanmateo.org/DocumentCenter/View/2486/Shoreline-Park-Specific-Plan?bidId=), accessed August 19, 2022.

## LAND USE AND PLANNING

The existing 2030 General Plan land use designations include the following:

- **Single-Family Residential.** This designation allows one single-family dwelling unit per parcel and up to nine dwelling units per acre.
- **Low Density Multi-Family Residential.** This designation allows attached and detached, multi-family units from 9 to 17 units per net acre. These units are typically 1 to 2 stories.
- **Medium Density Multi-Family Residential.** This designation allows attached, multi-family units from 18 to 35 units per net acre. These units are typically 2 to 4 stories.
- **High Density Multi-Family Residential.** This designation allows attached, multi-family units from 36 to 50 units per net acre. These units are typically 3 to 5 stories.
- **Neighborhood Commercial.** This designation allows shopping centers that serve the immediate neighborhood at a floor area ratio (FAR) of 0.5 to 1.0 and heights between 25 to 45 feet.
- **Regional/Community Commercial.** This designation allows large shopping centers that rely on large trade areas like the Hillsdale and The Island Shopping centers and some areas of El Camino Real. The allowed FAR is between 1.0 to 2.5 and building heights of 35 to 55 feet.<sup>16</sup>
- **Downtown Commercial.** This designation allows a range of retail, service, and office uses. High-density residential is allowed above the ground floor. The allowed FAR is between 1.0 to 3.0 with building heights from 35 to 55 feet.
- **Service Commercial.** This designation allows city- and regional-serving commercial services such as automotive repair, pet hospitals, and building material yards. The allowed FAR is 1.0 with building heights up to 30 feet.
- **Manufacturing/Industrial.** This designation allows light manufacturing, warehousing, and distribution facilities with an FAR of 1.0 and building heights between 35 to 90 feet.
- **Executive Office.** This designation allows office parks, including concentrations of medical or professional offices. Permitted accessory uses include restaurants, personal services, travel agencies, printing, ticket outlets, clubs, and recreation facilities. The allowed FAR is between 0.62 and 1.0 with building heights between 35 to 55 feet.
- **Public Facilities.** This designation includes City and other government-owned facilities.
- **Parks/Open Space.** This designation allows public parks and City-owned conservation lands and private open space or recreation facilities.
- **Utilities.** This designation allows public utilities facilities.
- **Transportation Corridors.** This designation includes freeways and fixed transit lines.
- **Major Institution/Special Facility.** This designation allows private and public institutional, educational, recreational, and community service uses.

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<sup>16</sup> Densities up to 75 units per acre, and height limits up to a maximum of 75 feet may be allowed in some areas within these land use categories, as specified in the area specific policy for Downtown (PA 3), and Policies PA 5.2 and PA 6.3 of the Land Use Element.



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- **Mixed Use: Executive Office/High Density Multi-Family.** This designation allows mixed-use office and high-density multi-family residential uses.
- **Mixed Use: Neighborhood Commercial/High Density Multi-Family.** This designation allows mixed-use neighborhood commercial with high-density multi-family residential uses.
- **Mixed Use: Regional/Community Commercial/High Density Multi-Family.** This designation allows mixed-use regional or community commercial with high-density multi-family residential uses.
- **Transit-Oriented Development Areas.** This designation is for parcels within close proximity of the Hillsdale Station Area and Hayward Park Caltrain Station Area. Permitted uses include multi-family housing, major employment centers, retail, office, and other supporting uses.

### Zoning Designations

The City's Zoning Ordinance identifies specific zoning districts within the city and describes the development standards which apply to each district. Zoning districts within the City include the following:

- C1 – Neighborhood Commercial
- C2 – Regional/Community Commercial
- C3 – Regional/Community Commercial
- C4 – Service Commercial
- CBD – Central Business
- CBD/S – Central Business Support
- E1 – Executive Park
- E2 – Executive Offices
- M1 – Manufacturing
- R1 – One Family Dwellings (includes R1A, R1B, and R1C)
- R2 – Two Family Dwellings
- R3 – Multiple Family Dwellings (Med Density)
- R4 – Multiple Family Dwellings (High Density)
- R5 – Multiple Family Dwellings (High Density)
- R4-D, R5-D, and R6-D – Downtown Residential Districts (Med High to High Density)
- A – Agriculture
- OS – Open Space
- S – Shoreline
- BMSP – Bay Meadows Specific Plan
- TC – Transportation Corridor
- TOD – Transit Oriented Development

### Existing Land Use

In this section, the term “existing land use” refers to the existing built environment, which may be different from the General Plan or zoning designations that are applied by the City for planning purposes. The acreages associated with each land use, based on available mapping data, are shown in Table 4.10-1, *Existing Land Use*.

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**TABLE 4.10-1 EXISTING LAND USE**

Existing Land Use	Definition	Acres*	Percent of Total
Single-Family Residential	Detached, residential units that occur on a single parcel.	2,760	27.9%
Multi-Family Residential	Attached, residential units. These units can range from duplexes, triplexes, townhomes, and multi-story apartment buildings.	780	7.9%
Mixed Use	Includes a mix of uses within a single building such as residential, office, or commercial.	15	0.2%
Commercial	Includes places of commerce such as retail shops, malls, hotels, auto dealerships, restaurants, banks, gas stations, and personal services such as salons, laundromats, and travel agents.	330	3.3%
Office	Includes places of employment without a retail component.	315	3.2%
Industrial	Includes light manufacturing, service and repair, and warehousing.	75	0.8%
Public Facility	Includes schools and public facilities such as City Hall or the wastewater treatment plant.	510	5.1%
Quasi-Public	Includes churches, medical facilities, and privately held utility facilities such as electrical substations.	115	1.2%
Public Parks and Recreation	Includes publicly owned park and recreation facilities.	330	3.3%
Open Space	Undeveloped land that is open to the public that typically includes trails and paths.	360	3.6%
Private Recreation	Includes privately owned recreation facilities such as the Poplar Creek Golf Course, Shipman Swim School, and Coyote Point Yacht Club.	140	1.4%
Vacant	Includes vacant, non-developed parcels.	70	0.7%
Rights-of-Way (ROW)	Includes the area consumed by the roadway network from curb to curb.	1,955	19.7%
Water	Includes the San Francisco Bay, Seal Slough, canals, and creeks.	2,150	21.7%
<b>Total</b>		<b>9,905</b>	<b>100%</b>

\* Acreages have been rounded.

Source: Urban Footprint and PlaceWorks, 2018.

### *Residential*

San Mateo is primarily composed of residential land uses, representing approximately 36 percent of the area within the City Limits. Single-family residential uses are spread throughout the City Limits and account for approximately 2,760 acres of land. Multi-family uses account for 780 acres of land within the City Limits and are scattered throughout the city, though they tend to occur along major thoroughfares and in concentrated sites like Bay Meadows and along Seal Slough.

### *Mixed Use*

Mixed-use developments, including commercial/office, residential/commercial, and residential/office, account for approximately 15 acres of the City Limits, less than 1 percent of the area within the City Limits. Mixed uses generally occur within the Downtown area and along El Camino Real.

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### *Commercial*

Commercial uses, including retail, services, small, stand-alone offices, and lodging, account for approximately 330 acres within the City Limits. Commercial uses, which account for 3 percent of the area within the City Limits, are generally located within Downtown and along major corridors such as El Camino Real and frontage roads of US Highway 101 and SR-92.

### *Office*

The City Limits contain 315 acres of office uses, which account for 3 percent of the city. Office uses are typically large employment complexes, such as the Franklin Templeton Office Campus, without a retail component and can mostly be found in the Downtown and along major corridors such as El Camino Real and the frontage area of SR-92.

### *Industrial*

The city contains 75 acres of industrial uses, which represents less than 1 percent of the city. These uses include automotive repair, light manufacturing, and warehousing and mainly occur near the railroad track and the frontage area of US Highway 101.

### *Public Facility and Quasi-Public*

There are 625 acres of public and quasi-public uses scattered throughout the City Limits. These uses account for approximately 6 percent of the City Limits. Some of these uses include schools, libraries, and the local community college, College of San Mateo.

### *Public Parks and Recreation, Open Space, and Private Recreation*

Public parks, recreation, open space, and private recreation uses account for approximately 830 acres, or 8 percent, of the City Limits, and include City and County parks and other recreation facilities and private recreation uses like Poplar Creek Golf Course and the Coyote Point Yacht Club. In general, parks, recreation, and open space uses are distributed throughout the City Limits.

### *Vacant*

Less than 1 percent of land within the City Limits is vacant. The 70 acres of vacant land are scattered throughout the City Limits, including sites containing only surface parking.

### *Rights-of-Way*

Street rights-of-way, the roadway area from curb to curb, represent approximately 20 percent of the area within the City Limits.

### *Water*

Water, such as the San Francisco Bay, Seal Slough, and canals, comprises approximately 22 percent of the City Limits.

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### 4.10.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant land use and planning impacts if it would:

1. Physically divide an established community.
2. Cause a significant 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.
3. In combination with past, present, and reasonably foreseeable projects, result in cumulative land use and planning impacts in the area.

### 4.10.3 IMPACT DISCUSSION

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LU-1	The proposed project would not physically divide an established community.
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The physical division of an established community typically refers to the construction of a physical feature or the removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community or between a community and outlying areas. For example, an airport, roadway, or railroad track through an existing community could constrain travel from one side of the community to another or impair travel to areas outside of the community.

Potential future development under the proposed project would not result in a change in land use or zoning that would cause the construction or removal of any physical features or means of access throughout the EIR Study Area or the region. The proposed project would increase development potential in the EIR Study Area; however, potential future development would be focused in ten General Plan Study Areas, as described in Chapter 3, *Project Description*, of this Draft EIR.

While the proposed General Plan does not prohibit development opportunities outside of the General Plan Study Areas, it does require the City to plan carefully for balanced growth. The Land Use (LU) Element of the proposed General Plan sets the foundation for future growth, change, and preservation. The following General Plan 2040 goal and policy would serve to minimize potential adverse impacts related to established communities:

- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.
  - **Policy LU 1.8: New Development within the Sphere of Influence.** Work with the County of San Mateo to require new developments and related infrastructure within the Sphere of Influence to be consistent with the City's General Plan, Zoning Code requirements, and development standards.

The proposed General Plan calls for transportation improvements. While these types of improvements could be installed and implemented under the proposed project, they would be intended to facilitate

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movement throughout the city, improve public safety, and connect new and existing development; they would not create new physical barriers or inhibit movement in the EIR Study Area. Therefore, implementation of the proposed project would not physically divide an established community. Impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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LU-2	The proposed project would not cause a significant 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.
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### Land Use Plans, Policies, and Regulations

While the proposed General Plan is the primary planning document for the City of San Mateo and the proposed update is intended to ensure consistency between the General Plan, Zoning Ordinance, and federal and State laws, implementation of the proposed project has the potential to conflict with “land use” plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. For the purposes of this EIR a “land use” plan is a policy, or regulation that addresses how land is used. The following discusses the proposed project and its relationship to the land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect as listed in Section 4.11.1.1, *Regulatory Framework*.

#### *Cortese-Knox Act*

The San Mateo SOI is regulated by the San Mateo County LAFCo and any proposed jurisdictional boundary changes, including annexations and detachments of territory to and/or from the City, is subject to the San Mateo County LAFCo review and approval. The San Mateo County LAFCo also must review any contractual service agreements and determine the SOI. The City does not propose to annex or de-annex any areas of the SOI as part of the proposed project. However, annexation proposals could occur during the buildout horizon of the proposed General Plan.

The Land Use (LU) Element of the proposed General Plan sets the foundation for future growth, change, and preservation. In addition to the proposed goal and policy identified in impact discussion LU-1, the following General Plan 2040 goal and policies would serve to minimize impacts from annexations and support the purpose of the San Mateo LAFCo to encourage the orderly growth of local communities, discourage urban sprawl, and assure efficient local government service:

- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.

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- **Policy LU 1.2: General Plan 2040 Maximum Development.** The General Plan Update Environmental Impact Report (EIR) assumes the following development projections for the year 2040:
  - 21,410 new dwelling units.
  - 4,325,000 square feet of new nonresidential floor area

When approved nonresidential development reaches half of the anticipated development, evaluate the citywide jobs-housing balance.

When approved development within City Limits and unincorporated properties within the Sphere of Influence reaches the maximum number of new residential units and net new nonresidential square feet projected in the General Plan EIR, require that environmental review conducted for any subsequent development project address growth impacts that would occur from development exceeding the General Plan EIR's projections.

- **Policy LU 1.3: Optimize Development Opportunities.** Encourage new development in major commercial and transit-oriented development areas, including the Downtown, Caltrain station areas, and the El Camino Real corridor, to maximize the density and intensity specified in the Land Use Plan and to efficiently use land and infrastructure resources.
- **Policy LU 1.4: Mixed-Use.** Encourage mixed-use developments to include increased residential components to provide greater proximity between jobs and housing, promote pedestrian activity, and reduce traffic congestion and vehicle miles traveled (VMT).
- **Policy LU 1.5: Surplus Land.** Consider redesignating City-owned land not required for public services, facilities, or infrastructure for development of affordable housing.
- **Policy LU 1.7: Annexation.** Annex urbanized areas of the unincorporated land adjacent to the City Limits where landowners petition the City to be annexed, subject to the following conditions:
  - a. The annexation is comprehensive, rather than piecemeal; and
  - b. Landowners will pay the full cost of City services, will assume a proportionate share of existing City debts, and will contribute to the existing capital improvements of the City, which will benefit the area to be annexed.

The proposed project acknowledges that the City will follow adopted San Mateo County LAFCo policies to review proposed SOI changes and annexation requests. Accordingly, the proposed project would not conflict with or be inconsistent with the San Mateo County LAFCo policies, and the impact would be *less than significant*.

### *Housing Regulations*

As described in Section 4.10.1.1, *Regulatory Framework*, various State and local laws, regulations, and measures seek to expand housing opportunities. For example, the HOME Act is intended to provide access to more rental and ownership options for working families who would otherwise be priced out of neighborhoods. The Land Use (LU) Element of the proposed General Plan sets the foundation for future



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growth, change, and preservation. In addition to the goal and policies previously identified, the following General Plan 2040 goals and policies would serve to support housing regulations:

- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.
  - **Policy LU 1.1: Equitable Development.** Prioritize development projects that meet social and economic needs of the economically vulnerable populations to address and reverse the underlying socioeconomic factors in the community that contribute to residential and social segregation in the city. Provide a range of housing types, sizes, and affordability levels in all San Mateo neighborhoods.
  - **Policy LU 1.6: Legal Nonconforming Developments.** Allow legally established nonconforming uses and buildings to be maintained, have minor expansions where appropriate, and be reconstructed if destroyed by fire or natural disaster. Encourage reconstruction and/or minor expansions to have a design that is visually compatible with surrounding development and complies with the City's development standards.
- **Goal LU-3:** Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.
  - **Policy LU 3.1: Housing Diversity.** Promote safe, attractive, and walkable residential neighborhoods with diverse types and sizes of homes for individuals, families, and households of all income levels.
- **Goal LU-13:** Maintain Development Review and Building Permit processes that are comprehensive and efficient.
  - **Policy LU 13.1: Development Review Process.** Review development proposals and building permit applications in an efficient and timely manner while maintaining quality standards in accordance with City codes, policies, and regulations, and in compliance with State requirements.
  - **Policy LU 13.2: Public Education.** Promote public awareness of the development review and permitting process.
  - **Policy LU 13.3 Fee Information.** Maintain an updated schedule of fees and housing development affordability requirements, all zoning ordinances and development standards, and annual fee or finance reports on the City's website. In addition, maintain archives of impact fee nexus studies, cost of service studies, or equivalent reports for ease of information sharing with the public.

Accordingly, the proposed project would not conflict with or be inconsistent with the HOME Act, and the impact would be *less than significant*.

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### *Plan Bay Area*

While ABAG's *Plan Bay Area 2050* does not override local land use control, it provides guidance to the local agencies such as San Mateo on how future development can be consistent with the State's GHG and VMT reduction goals. This includes constructing more infill development in downtowns and centers in close proximity to jobs and services.

The Land Use (LU) Element of the proposed General Plan sets the foundation for future growth, change, and preservation. In addition to the goals and policies previously identified, the following General Plan 2040 goals, policies, and actions would serve to minimize impacts from conflicts with *Plan Bay Area*:

- **Goal LU-3:** Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.
  - **Policy LU 3.7: Visitor Economy.** Collaborate with other Peninsula cities and the San Mateo County/Silicon Valley Convention and Visitors Bureau to support the continued development of the visitor economy of both the city and the region, including lodging, entertainment, recreation, retail, and local events; encourage uses that attract visitors. Incentivize through fee reduction and visitor perks, sustainable modes of travel to and from the city to reduce both the use of air travel and gas-powered vehicles.
  - **Policy LU 3.8: Workplaces.** Develop office buildings and business parks to facilitate transit, pedestrian, and bicycle commutes. Provide compact development, mixed uses, and connectivity to transit to reduce vehicle miles traveled (VMT).
- **Goal LU-4:** Maintain downtown San Mateo as the economic, cultural, and social center of the community.
  - **Policy LU 4.1: Downtown Land Uses.** Allow and prioritize a wide range of residential, dining, entertainment, lodging, and other commercial uses downtown, at high intensities and densities, with strong multi-modal connectivity to the San Mateo Caltrain station and other transit.
  - **Action LU 4.4: Downtown Area Plan.** Update the Downtown Area Plan to support and strengthen the Downtown as a vibrant and active commercial, cultural, and community gathering district. The updated Downtown Area Plan shall align with the General Plan, integrate recommendations from other concurrent City efforts, focus growth and intensity in proximity to the Caltrain station, encourage superblock concepts or approaches and allow parklets, update parking standards and parking management strategies, allow for increased housing units and density, and support high-quality, pedestrian-oriented design and architecture.
- **Goal LU-5:** Promote residential and mixed land uses along El Camino Real to strengthen its role as both a local and regional corridor.
  - **Action LU 5.3: El Camino Real Corridor Plan.** Prepare a Corridor Plan for El Camino Real that assembles existing planning documents for the corridor into a single comprehensive plan that implements the El Camino Real policies in General Plan 2040.
- **Goal LU-6:** Promote transit-oriented development around the Hillsdale Caltrain station.

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- **Policy LU 6.1: Rail Corridor Transit-Oriented Development Plan (Rail Corridor Plan).** Continue to implement the Rail Corridor Plan to allow, encourage, and provide guidance for the creation of world-class transit-oriented, mixed-use development (TOD) within a half-mile radius of the Hillsdale and Hayward Park Caltrain stations, while maintaining and improving the quality of life for those who already live and work in the area.
- **Action LU 6.3: Hillsdale Station Area Plan.** Update the Hillsdale Station Area Plan to foster higher-density residential, office and mixed-use, transit-oriented development that connects to neighborhoods to the east and west, improves bicycle and pedestrian circulation to the station, and increases park and open space areas.
- **Goal LU-7:** Support the transition of shopping areas designated for new uses into vibrant districts with a range of housing, shopping, services, and jobs.
  - **Action LU 7.2: Bridgepointe Area Plan.** Update and consolidate the Bridgepointe Master Plan and Mariner's Island Specific Plan into one planning document to guide redevelopment of the Bridgepointe Shopping Center and the surrounding properties into a mixed-use neighborhood that maintains its regional retail component while developing a diverse range of housing types, including affordable housing; new parks and recreational facilities; community gathering places; ample facilities to support transit, bicycling, and walking; and a range of businesses and services. The plan shall include safe access for pedestrians, cyclists, and transit riders from Bridgepoint to the City's transit corridors, such as Caltrain and El Camino Real.
  - **Action LU 7.3: Bel Mateo Area Plan.** Prepare a Specific Plan or Master Plan to guide redevelopment of the Bel Mateo area into a mixed-use neighborhood with a diverse range of neighborhood-serving commercial uses and amenities; new market-rate and affordable housing, ample facilities to support bicycling and walking; and publicly accessible park and open space areas.
- **Goal LU-8:** Support the equitable health and well-being of all neighborhoods in San Mateo and all members of the San Mateo community by improving conditions in equity priority communities.
  - **Policy LU 8.7: Access to Parks and Recreation.** Provide attractive, comfortable, and safe pedestrian and cyclist access to public parks and recreational facilities in and near equity priority communities.
  - **Action LU 8.8: Streetscape and Safety Improvements.** Work with residents in equity priority communities to identify sidewalk, lighting, landscaping, and roadway improvements needed to improve routes to parks, schools, recreation facilities, and other destinations within the community. Prioritize investments to address health disparities in equity priority communities in the annual Capital Improvement Program.
- **Goal LU-10:** Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.
  - **Policy LU 10.2: Decarbonized Building Stock.** Eliminate the use of fossil fuels as an energy source in all new building construction and reduce the use of fossil fuels as an energy source in the existing building stock at the time of building alteration through requirements for all-electric construction.

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- **Policy LU 10.3: Sustainable Improvements.** Ensure that all improvements to existing structures are developed or remodeled in a sustainable and resilient manner.
- **Action LU 10.4: Climate Action Plan Implementation.** Implement the greenhouse gas reduction strategies to meet the City's Climate Action Plan emission-reduction goals.
- **Action LU 10.5: Climate Action Plan Monitoring.** Monitor and report progress on the implementation of the City's Climate Action Plan on an annual basis. Regularly review new opportunities and approaches to reduce emissions consistent with the Climate Action Plan's goals.
- **Action LU 10.6: Greenhouse Gas Inventory.** Every five years, prepare an updated greenhouse gas emissions inventory consistent with the Climate Action Plan.
- **Action LU 10.7: Engage the Public in the Climate Action Plan.** Provide public information to educate residents and businesses on the Climate Action Plan and to spark behavioral changes in individual energy and water consumption, transportation mode choices, and waste reduction.
- **Action LU 10.8: Building Decarbonization.** Evaluate and adopt reach codes and other policies to decarbonize the building stock.
- **Action LU 10.9: Resilience of Critical Facilities and Public Infrastructure.** Identify critical facilities and public infrastructure in areas vulnerable to climate change hazards, and work to site, design, and upgrade these facilities with consideration for future increases in severity that may occur over the anticipated life of the development. In cases where facilities cannot be sustainably maintained, evaluate the costs and benefits of relocation. Where facilities can be safely sited for the near term, but future impacts are likely, prepare an adaptive management plan detailing steps for maintenance, retrofitting, and/or relocation.
- **Action LU 10.10: Clean Fuel Infrastructure.** Support efforts to build electric vehicle charging stations and clean fuel stations in San Mateo, including hydrogen and sustainably sourced biofuels, as supported by market conditions.
- **Goal LU-14:** Collaborate and communicate with other public agencies regarding regional issues.
  - **Policy LU 14.3: Plan Bay Area.** Remain engaged in current and future long-range plans prepared by Metropolitan Transportation Commission (MTC), Association of Bay Area Governments (ABAG), and other regional organizations to influence and be aware of projected growth assumptions for San Mateo and regional priorities for transportation, infrastructure, and the economy that could affect the city.
  - **Policy LU 14.4: Priority Development Areas.** Support the strategies outlined in Plan Bay Area 2050, especially within City-identified Priority Development Areas.

In addition to the proposed General Plan goals, policies, and actions listed above, see Chapter 4.2, *Air Quality*, Chapter 4.5, *Energy*, and Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR for complete lists of proposed General Plan goals, policies, and actions that would minimize conflict with the goals of ABAG's *Plan Bay Area*. Accordingly, the proposed project would not conflict with or be inconsistent with *Plan Bay Area 2050*, resulting in a *less-than-significant* impact.

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### *Airport Land Use Compatibility Plan*

The EIR Study Area is located within the San Carlos Airport and San Francisco International Airport AIA, as shown on Figure 4.8-1, *Airport Influence Areas*, in Chapter 4.8, *Hazards and Hazardous Materials*, of this Draft EIR. Land use compatibility with the airports is regulated by C/CAG. Pursuant to the California Public Utilities Code Section 21676, development of land and changes in land use around the airport must be consistent with the ALUCP. The Land Use (LU) Element of the proposed General Plan sets the foundation for future growth, change, and preservation. The following General Plan 2040 goal and policy would serve to minimize impacts from development in close proximity to the airports:

- **Goal LU-14:** Collaborate and communicate with other public agencies regarding regional issues.
  - **Policy LU 14.1: Inter-Agency Cooperation.** Promote and participate in cooperative planning with other public agencies and the jurisdictions within San Mateo County, such as the 21 Elements regional collaboration, regarding regional issues such as water supply, traffic congestion, rail transportation, wildfire hazards, air pollution, waste management, fire services, emergency medical services, and climate change.

Accordingly, the City would coordinate with C/CAG regarding development in close proximity to the airports. Future development within Area B of the AIA would be subject to review by C/CAG for determination of consistency with the ALUCP. Therefore, the proposed project would not conflict with or be inconsistent with the ALUCP, resulting in a *less-than-significant* impact.

### Non-Land Use Plans, Policies, and Regulations

Plans, policies, and regulations concerning a wide range of topics can also have direct and indirect effects on land use decision-making. The proposed project's potential to conflict with other applicable plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect are discussed in detail in the other environmental topic chapters of this Draft EIR. Specifically, these discussions are in Chapter 4.2, *Air Quality*; Chapter 4.3, *Biological Resources*; Chapter 4.4, *Cultural Resources*; Chapter 4.7, *Greenhouse Gas Emissions*; Chapter 4.8, *Hazards and Hazardous Materials*; Chapter 4.9, *Hydrology and Water Quality*; Chapter 4.11, *Noise*; Chapter 4.13, *Population and Housing*; Chapter 4.14, *Public Services*; Chapter 4.15, *Transportation*; Chapter 4.16, *Tribal Cultural Resources*; Chapter 4.17, *Utilities and Service Systems*; and Chapter 4.18, *Wildfire*. Some of these key regulations include:

- **Air Quality.** Bay Area Air Quality Management District (BAAQMD) has prepared several plans to attain the National ambient air quality standards (AAQS) and California AAQS. The air quality management plans (AQMP) prepared by BAAQMD provide the framework for San Francisco Bay Area Air Basin to achieve attainment of the State and federal AAQS.
- **Biological Resources.** The federal Endangered Species Act (ESA) and California ESA protects plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish and Wildlife. The Migratory Bird Treaty Act protects migratory birds, any of their parts, eggs, and nests. The Bald and Golden Eagle Protection Act of 1940, as amended, provides for the protection of bald eagles and golden eagles. The federal Clean Water Act (CWA) and State CWA protect habitat for animals and

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plants. The Native Plant Protection Act of 1977 was created with the intent to “*preserve, protect and enhance rare and endangered plants in this State.*”

- **Cultural and Tribal Cultural Resources.** The National Historic Preservation Act defines the responsibilities of federal agencies to protect and preserve Historic Properties. The American Indian Religious Freedom Act and the Native American Graves Protection and Repatriation Act of 1990 protect Native American artifacts. California Government Code Section 65352.3-5, formerly known as SB 18, and Assembly Bill 52 are both intended to protect Native American resources as well.
- **Greenhouse Gas Emissions and Vehicle Miles Traveled.** *Plan Bay Area 2050* provides guidance to reduce VMT and thus reduce GHG emissions to meet the State’s goals.
- **Airport Hazards.** The Airport Land Use Compatibility Plan (ALUCP) covering all three public airports in San Mateo County was approved by the City/County Association of Governments of San Mateo County (C/CAG) in December 1996. The C/CAG has since adopted updated ALUCPs for San Francisco International Airport (November 2012), Half Moon Bay Airport (September 2014), and San Carlos Airport (October 2015). The updated ALUCPs describe a series of land use safety and compatibility zones and associated guidelines for development around each airport that are intended to prevent development that is incompatible with airport operations.
- **Hydrology and Water Quality.** The federal and State CWAs include regulations for protecting water quality. The City of San Mateo is within the jurisdiction of the San Francisco Bay RWQCB (Region 2). The San Francisco Bay RWQCB addresses region-wide water quality issues through the creation and triennial update of the *Water Quality Control Plan* for the San Francisco Bay Region (Basin Plan).
- **Natural Hazards.** The City of San Mateo adopted the *Local Hazard Mitigation Plan* (LHMP) in June 2017. The LHMP focuses on protecting the community from risks associated with hazards such as earthquakes, floods, fires, hazardous materials and other hazards. The LHMP analyzes these hazards and the risks they pose and includes goals and mitigation strategies to establish what measures will be undertaken to reduce these risks to levels determined by the City of San Mateo to be reasonable.
- **Population and Housing.** ABAG is the official comprehensive planning agency for the San Mateo County area and is responsible for taking the overall RHNA provided by the State and preparing a formula for allocating that housing need by income level across its jurisdiction.
- **Utilities and Service Systems.** The National Pollutant Discharge Elimination System permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems.

A complete list and description of the applicable non-land-use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect, is included in the individual chapters of this Draft EIR listed previously.

In summary, the proposed General Plan is the primary planning document for the City of San Mateo. The proposed General Plan is intended to ensure consistency between the General Plan, Zoning Ordinance, and federal and State laws. The proposed CAP update does not involve any land use changes. Because the proposed General Plan is the overriding planning document for the City, and because the proposed General Plan involves amending the current General Plan, the impact would be *less than significant*.



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**Significance without Mitigation:** Less than significant.

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LU-3	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative land use and planning impacts in the area.
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The geographic context for the cumulative land use and planning impacts would occur from potential future development under the proposed project combined with impacts of development on lands adjacent to the city.

As discussed in impact discussions LU-1 and LU-2, the proposed project would not divide an established community or conflict with established plans, policies, and regulations. The proposed project would not conflict with any State, regional, or local land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Future development that would be allowed under the proposed project would not create substantial land use impacts. Development would likely continue to occur in the surrounding cities and the unincorporated areas of San Mateo County. However, such development would largely be taking place in already urbanized areas and would not require development or demolition that would create land use conflicts or divide established communities. Therefore, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts related to land use changes, and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## 4.11 NOISE

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential noise impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed General Plan. Noise monitoring and modeling data are included as Appendix D, *Noise Data*, of this Draft EIR.

### 4.11.1 ENVIRONMENTAL SETTING

#### 4.11.1.1 NOISE AND VIBRATION FUNDAMENTALS

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude. When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. Therefore, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to extremely low and extremely high frequencies. This method of frequency weighting is referred to as A weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

### Noise Exposure and Community Noise

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such

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as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in  $L_{eq}$ ) and the average daily noise levels/community noise equivalent level (in  $L_{dn}$ /CNEL). The  $L_{eq}$  is a measure of ambient noise, while the  $L_{dn}$  and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level ( $L_{eq}$ )** is the average acoustic energy content of noise for a stated period of time. Thus, the  $L_{eq}$  of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **$L_{max}$**  is the instantaneous maximum noise level for a specified period of time.
- **$L_{min}$**  is the minimum, instantaneous noise level experienced during a given period of time.
- **Day-Night Average ( $L_{dn}$ )** is a 24-hour average  $L_{eq}$  with a 10-dBA “weighting” added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour  $L_{eq}$  would result in a measurement of 66.4 dBA  $L_{dn}$ .
- **Community Noise Equivalent Level (CNEL)** is a 24-hour average  $L_{eq}$  with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

Table 4.11-1, *Common Noise Descriptors*, provides a list of other common acoustical descriptors.

**TABLE 4.11-1 COMMON NOISE DESCRIPTORS**

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.

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**TABLE 4.11-1 COMMON NOISE DESCRIPTORS**

Descriptor	Definition
Frequency, Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sounds are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, $L_{eq}$	The average acoustic energy content of noise for a stated period of time. Thus, the $L_{eq}$ of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
$L_{max}$ , $L_{min}$	The maximum and minimum A-weighted noise level during the measurement period.
$L_{01}$ , $L_{10}$ , $L_{50}$ , $L_{90}$	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, $L_{dn}$ or DNL	A 24-hour average $L_{eq}$ with a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour $L_{eq}$ would result in a measurement of 66.4 dBA $L_{dn}$ .
Community Noise Equivalent Level, CNEL	A 24-hour average $L_{eq}$ with a 5 dBA “weighting” during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour $L_{eq}$ would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Source: ECORP, 2023.

## Sound Measurement

As previously described, sound pressure is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear’s de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). When the standard logarithmic dB is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting

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sound level at a given distance would be three dB higher than one source under the same conditions.<sup>1</sup> For example, a 65-dBA source of sound, such as a truck, when joined by another 65 dBA source results in a sound amplitude of 68 dBA, not 130 dBA (i.e., doubling the source strength increases the sound pressure by three dBA). Under the decibel scale, three sources of equal loudness together would produce an increase of five dBA.

Typical noise levels associated with common noise sources are depicted in Figure 4.11-1, *Common Noise Levels*.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called  $L_{eq}$ ), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the  $L_{50}$  noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time it is less than this level. This level also represents the level exceeded 30 minutes in an hour. Similarly, the  $L_2$ ,  $L_8$  and  $L_{25}$  values represent the noise levels that are exceeded 2, 8, and 25 percent of the time, or 1, 5, and 15 minutes per hour. These “ $L_n$ ” values are typically used to demonstrate compliance for stationary noise sources with a city’s noise ordinance, as discussed below. Other values typically noted during a noise survey are the  $L_{min}$  and  $L_{max}$ . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level ( $L_{dn}$ ). As described above, the CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 p.m. to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. The  $L_{dn}$  descriptor uses the same methodology but only adds a 10 dBA increment between 10:00 p.m. and 7:00 a.m. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher).

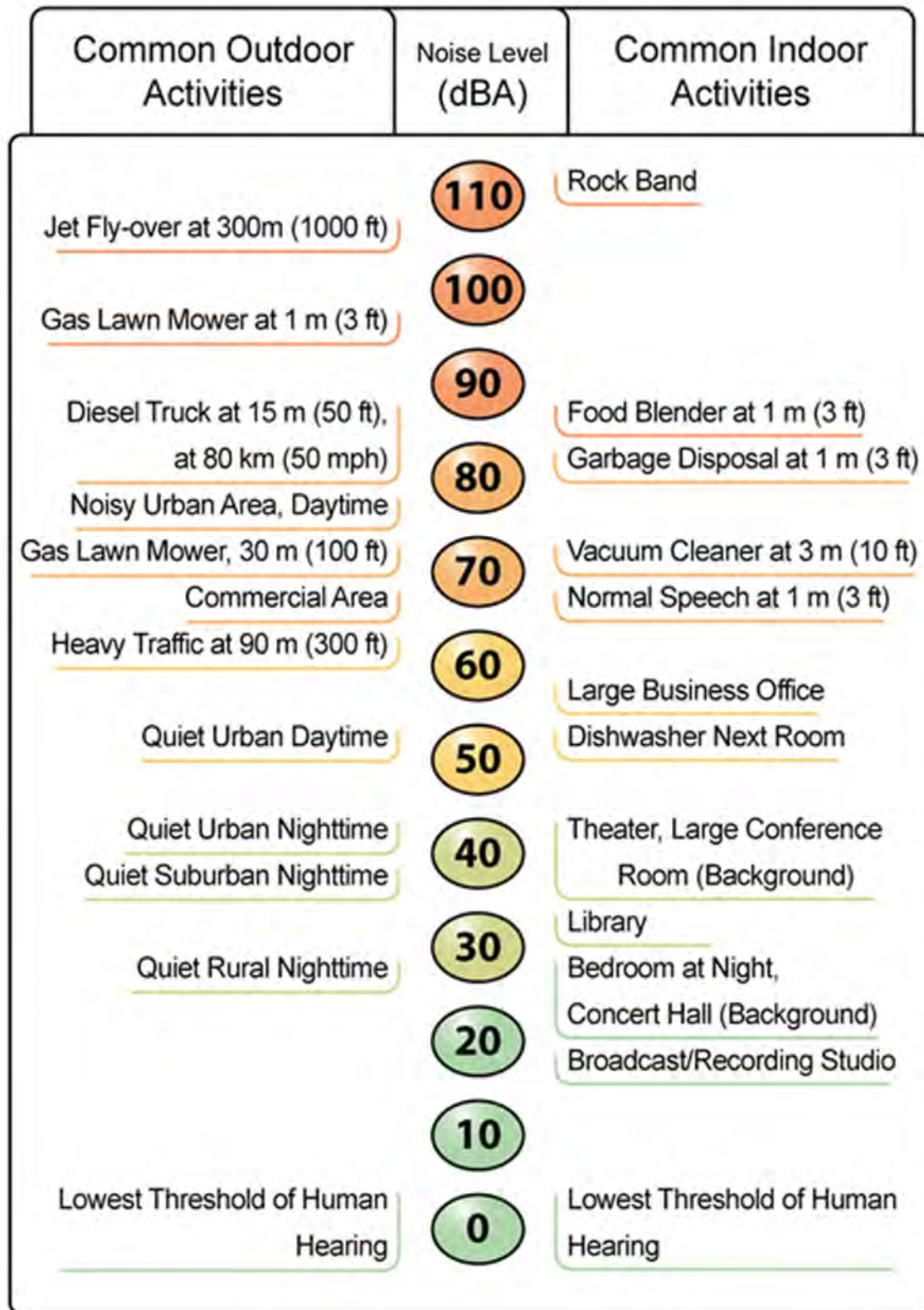
### Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

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<sup>1</sup> Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 5, 2023.

## NOISE



Source: California Department of Transportation (Caltrans) 2020a.

Figure 4.11-1  
Common Noise Levels



## NOISE

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL or  $L_{dn}$  is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response is expected. An increase of 5 dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

### *Hearing Loss*

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

### *Annoyance*

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The  $L_{dn}$  as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources.

### *Psychological and Physiological Effects of Noise*

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75

dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain.

## Noise Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, as well as stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6.0 dB (dBA) for each doubling of distance from a stationary or point source.<sup>2</sup> Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3.0 dBA for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics.<sup>3</sup> No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3.0 dB per doubling of distance is assumed.<sup>4</sup>

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA,<sup>5</sup> while a solid wall or berm generally reduces noise levels by 10 to 20 dBA.<sup>6</sup> However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction of 35 dBA or greater.<sup>7</sup> To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver.

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<sup>2</sup> Federal Highway Administration, June 2017, *Construction Noise Handbook*, [https://www.fhwa.dot.gov/Environment/noise/construction\\_noise/handbook/handbook02.cfm](https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook02.cfm), accessed April 5, 2023.

<sup>3</sup> Federal Highway Administration, June 2017, *Construction Noise Handbook*, [https://www.fhwa.dot.gov/Environment/noise/construction\\_noise/handbook/handbook02.cfm](https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook02.cfm), accessed April 5, 2023.

<sup>4</sup> Federal Highway Administration, February 2017, *Effective Noise Control During Nighttime Construction*, [http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder\\_paper.htm](http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm), accessed April 5, 2023.

<sup>5</sup> Federal Highway Administration, 2006, Roadway Construction Noise Model.

<sup>6</sup> Federal Highway Administration, February 2017, *Effective Noise Control During Nighttime Construction*, [http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder\\_paper.htm](http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm), accessed April 5, 2023.

<sup>7</sup> Western Electro-Acoustic Laboratory, Inc. 2000, *Sound Transmission Sound Test Laboratory Report No. TL 96-186*.

## NOISE

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows.<sup>8</sup> The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.<sup>9</sup> Generally, in exterior noise environments ranging from 60 dBA CNEL to 65 dBA CNEL, interior noise levels can typically be maintained below 45 dBA, a typical residential interior noise standard, with the incorporation of an adequate forced air mechanical ventilation system in each residential building, and standard thermal-pane residential windows/doors with a minimum rating of Sound Transmission Class (STC) 28.<sup>10</sup> In exterior noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments less than 75 dBA CNEL with proper wall construction techniques following California Building Code (CBC) methods, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

## Vibration Fundamentals

Vibration is an oscillating motion in the earth. Like noise, vibration is transmitted in waves, but through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard. Sources of earthborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or humanmade causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. As with noise, vibration can be described by both its amplitude and frequency. Amplitude can be characterized in three ways—displacement, velocity, and acceleration. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage. For human response, however, an average vibration amplitude is more appropriate because it takes time for the human body to respond to the excitation (the human body responds to an average vibration amplitude, not a peak amplitude). Because the average particle velocity over time is zero, the RMS amplitude is typically used to assess human response. The RMS value is the average of the amplitude squared over time, typically a 1-second period.<sup>11</sup>

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<sup>8</sup> California Department of Transportation, 2002, *California Airport Land Use Planning Handbook*.

<sup>9</sup> Harris Miller, Miller & Hanson Inc., 2006, *Transit Noise and Vibration Impact Assessment, Final Report*.

<sup>10</sup> STC is an integer rating of how well a building partition attenuates airborne sound. In the U.S., it is widely used to rate interior partitions, ceilings, floors, doors, windows, and exterior wall configurations.

<sup>11</sup> Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 5, 2023.

Table 4.11-2, *Human Reaction and Damage to Buildings from Typical Vibration Levels*, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high-noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

**TABLE 4.11-2 HUMAN REACTION AND DAMAGE TO BUILDINGS FROM TYPICAL VIBRATION LEVELS**

Vibration Level Peak Particle Velocity (in/sec)	Vibration Level Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64-74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Threshold at which there is a risk of architectural damage to extremely fragile historic buildings, ruins, ancient monuments
0.10	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Threshold at which there is a risk of architectural damage to fragile buildings. Virtually no risk of architectural damage to normal buildings
0.25	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to historic and some old buildings
0.3	96	Vibrations may begin to feel severe to people in buildings	Threshold at which there is a risk of architectural damage to older residential structures
0.5	103	Vibrations considered unpleasant by people subjected to continuous vibrations	Threshold at which there is a risk of architectural damage to new residential structures and Modern industrial/commercial buildings

Source: California Department of Transportation, April 2020, *Transportation and Construction Vibration Guidance Manual*, <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>, accessed April 5, 2023. Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 5, 2023.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in Table 4.11-2 is considered very unlikely to cause damage to buildings of any type. Common sources for groundborne vibration are planes, trains, and construction activities such as earth moving that requires the use of heavy-duty equipment.

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The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

### 4.11.1.2 REGULATORY FRAMEWORK

#### Federal Regulations

##### *Federal Highway Administration*

Proposed federal or federal-aided highway construction projects at a new location, or the physical alteration of an existing highway that significantly changes the horizontal or vertical alignment or increases the number of through-traffic lanes, require an assessment of noise and consideration of noise abatement per 23 Code of Federal Regulations Part 772, “Procedures for Abatement of Highway Traffic Noise and Construction Noise.” The Federal Highway Administration (FHWA) has adopted noise abatement criteria for sensitive receivers—such as picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals—when “worst-hour” noise levels approach or exceed 67 dBA  $L_{eq}$ .<sup>12</sup>

##### *US Environmental Protection Agency*

In addition to FHWA standards, the United States Environmental Protection Agency (USEPA) has identified the relationship between noise levels and human response. The USEPA has determined that over a 24-hour period, an  $L_{eq}$  of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an  $L_{eq}$  of 55 dBA and interior levels at or below 45 dBA. These levels are relevant to planning and design and useful for informational purposes, but they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community; therefore, they are not mandated.

The USEPA also set 55 dBA  $L_{dn}$  as the basic goal for exterior residential noise intrusion. However, other federal agencies, in consideration of their own program requirements and goals, as well as the difficulty of actually achieving a goal of 55 dBA  $L_{dn}$ , have settled on the 65 dBA  $L_{dn}$  level as their standard. At 65 dBA  $L_{dn}$ , activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

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<sup>12</sup> California Department of Transportation, April 2020, *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects*, <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/traffic-noise-protocol-april-2020-a11y.pdf>, accessed October 4, 2022.

### *United States Department of Housing and Urban Development*

The United States Department of Housing and Urban Development (HUD) has set the goal of 65 dBA  $L_{dn}$  as a desirable maximum exterior standard for residential units developed under HUD funding. (This level is also generally accepted within the State of California.) Although HUD does not specify acceptable interior noise levels, standard construction of residential dwellings typically provides 20 dBA or more of attenuation with the windows closed. Based on this premise, the interior  $L_{dn}$  should not exceed 45 dBA.

### *Federal Interagency Committee on Noise*

The Federal Interagency Committee on Noise (FICON) thresholds of significance assist in the evaluation of increased traffic noise. The 2000 FICON findings provide guidance as to the significance of changes in ambient noise levels due to transportation noise sources. FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing and future noise-sensitive land uses (e.g., residential, etc.) are less than 60 dBA CNEL and the project creates a readily perceptible 5 dBA CNEL or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels range from 60 to 65 dBA CNEL and the project creates a barely perceptible 3 dBA CNEL or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA CNEL, and the project creates a community noise level increase of greater than 1.5 dBA CNEL.

### *National Institute of Occupational Safety and Health*

A division of the US Department of Health and Human Services, the National Institute for Occupational Safety and Health (NIOSH) has established a construction-related noise level threshold as identified in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998. NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. The intention of these thresholds is to protect people from hearing losses resulting from occupational noise exposure.

### *Aircraft Noise Standards*

The Federal Aviation Administration (FAA) Advisory Circular Number 150 5020 2, entitled "Noise Assessment Guidelines for New Helicopters" recommends the use of a cumulative noise measure, the 24-hour equivalent sound level [ $L_{eq}(24)$ ], so that the relative contributions of the heliport and other sound sources within the community may be compared. The  $L_{eq}(24)$  is similar to the  $L_{dn}$  used in assessing



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the impacts of fixed wing aircraft. The helicopter  $L_{eq}(24)$  values are obtained by logarithmically adding the single-event level (SEL) values over a 24-hour period.

Public Law 96 193 also directs the FAA to identify land uses which are “normally compatible” with various levels of noise from aircraft operations. Because of the size and complexity of many major hub airports and their operations, Federal Aviation Regulation Part 150 identifies a large number of land uses and their attendant noise levels. These recommended noise levels are included in Table 4.11-3, *Federal Aviation Administration Normally Compatible Community Sound Levels*.

**TABLE 4.11-3 FEDERAL AVIATION ADMINISTRATION NORMALLY COMPATIBLE COMMUNITY SOUND LEVELS**

Type of Area	$L_{eq}(24)$
Residential	
Suburban	57
Urban	67
City	72
Commercial	72
Industrial	77

Notes: The  $L_{eq}$  is the Equivalent Continuous Noise Level, which describes sound levels that vary over time, resulting in a single decibel value that takes into account the total sound energy over the period of time of interest.

Source: Federal Aviation Administration (FAA) Advisory Circular Number 150 5020 2, 1983.

## State Regulations

### *General Plan Guidelines*

The State of California, through its General Plan Guidelines, discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels, expressed in CNEL. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements. The General Plan Guidelines provide cities with recommended community noise and land use compatibility standards that can be adopted or modified at the local level based on conditions and types of land uses specific to that jurisdiction.

### *California Building Code*

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations (CCR), commonly referred to as the “California Building Code” (CBC). The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The City of San Mateo regularly adopts each new CBC update under the San Mateo Municipal Code (SMMC) Chapter 23.08, *Building Code*. CBC Part 2, Volume 1, Chapter 12, Section 1206.4, *Allowable Interior Noise Levels*, requires that interior noise levels attributable to exterior sources not exceed 45 dBA in any habitable room. The noise metric is evaluated

as either the day-night average sound level ( $L_{dn}$ ) or the community noise equivalent level (CNEL), whichever is consistent with the noise element of the local general plan.

The State of California's noise insulation standards for non-residential uses are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA  $L_{eq(1hr)}$ .

### *Airport Noise Standards*

California Code of Regulations Title 21, Section 5012, establishes 65 dBA CNEL as the acceptable level of aircraft noise for persons living in the vicinity of airports. Noise-sensitive land uses are generally incompatible in locations where the aircraft exterior noise level exceeds 65 dBA CNEL, unless an aviation easement for aircraft noise has been acquired by the airport proprietor. Assembly Bill (AB) 2776 requires any person who intends to sell or lease residential properties in an airport influence area to disclose that fact to the person buying the property.

## Regional Regulations

The Airport Land Use Compatibility Plan (ALUCP) covering all three public airports in San Mateo County was approved by the City/County Association of Governments of San Mateo County (C/CAG) in December 1996. The C/CAG is the Airport Land Use Commission (ALUC) responsible for promoting land use compatibility around the County's airports in order to minimize public exposure to excessive noise and safety hazards. The C/CAG has since adopted updated ALUCPs for San Francisco International Airport (November 2012), Half Moon Bay Airport (September 2014), and San Carlos Airport (October 2015).<sup>13</sup> The updated ALUCPs describe a series of land use safety and compatibility zones and associated guidelines for development around each airport that are intended to prevent development that is incompatible with airport operations. These regulations include height restrictions based on proximity to the airport and flight patterns. The ALUCPs delineate two Airport Influence Areas (AIA), Area A and Area B, within proximity to each airport. As a requirement for development located in Area A, the presence of existing airports within two miles of the property must be disclosed in the notice of intention to offer the property for sale. For development located within Area B of the AIA, the C/CAG Board shall exercise its statutory duty to review proposed land development proposals, among other plans, ordinances, amendments, and actions.

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<sup>13</sup> City/County Association of Governments of San Mateo County, 2022, Airport Land Use, <https://ccag.ca.gov/plansreportslibrary-2/airport-land-use/>, accessed October 4, 2022.

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### Local Regulations

#### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to noise are primarily in the Noise Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.11.3, *Impact Discussion*.

#### *City of San Mateo Municipal Code*

The SMMC includes various directives pertaining to noise and vibration. The SMMC is organized by title, chapter, and section, and in some cases, articles. Provisions related to noise and vibration impacts are included in Title 7, *Health, Sanitation, and Public Nuisance*, and Title 27, *Zoning*.

Chapter 7.30, *Noise Regulations*, establishes regulations to protect the inhabitants of the city against all forms of nuisances. Section 7.30.030, *Designated Noise Zones*, assigns the following noise zones:

- Noise Zone 1 includes property in any single-family residential zone, including adjacent parks and open space
- Noise Zone 2 includes all property in any commercial/mixed residential, multi-family residential, specific plan district or Planned Unit Development
- Noise Zone 3 includes all property in any commercial or central business district
- Noise Zone 4 includes all property in any manufacturing or industrial zone.

Section 7.30.040, *Maximum Permissible Sound Levels*, establishes noise level standards, which are shown in Table 4.11-4, *City of San Mateo Municipal Code Noise Level Standards*.

**TABLE 4.11-4 CITY OF SAN MATEO MUNICIPAL CODE NOISE LEVEL STANDARDS**

Noise Zone	Time Period	Noise Level (dB)
Noise Zone 1	10 p.m. – 7 a.m.	50
	7 a.m. – 10 p.m.	60
Noise Zone 2	10 p.m. – 7 a.m.	55
	7 a.m. – 10 p.m.	60
Noise Zone 3	10 p.m. – 7 a.m.	60
	7 a.m. – 10 p.m.	65
Noise Zone 4	Anytime	70

Source: City of San Mateo Municipal Code, 2023.

Section 27.56.090, *Noise*, prohibits sounds pressure level of an individual operation or plant (other than the operation of motor vehicles and other transportation facilities) exceed the decibel levels at the designated octave bands shown in Table 4.11-5, *City of San Mateo Municipal Code Sound Level Limits*.

**TABLE 4.11-5 CITY OF SAN MATEO MUNICIPAL CODE SOUNDS LEVEL LIMITS**

Octave Band Cycles/Second	Sound Level	
	Residence Sound Level <sup>a</sup>	Commercial Sound Level <sup>b</sup>
0 to 75	67	73
75 to 150	62	68
150 to 300	58	64
300 to 600	54	60
600 to 1200	49	55
1200 to 2400	45	51
2400 to 4800	41	47
Above 4800	37	43

Notes:

a. Maximum permitted sound level in decibels along residence district boundaries or 125 feet from plant or operation property line.

b. Maximum permitted sound level in decibels along commercial district boundaries or 125 feet from plant or operation property line.

Source: City of San Mateo Municipal Code, 2023.

### 4.11.1.3 EXISTING CONDITIONS

#### Noise-Sensitive Land Uses

Some land uses are considered more sensitive to noise levels than others due to the duration and nature of time people spend at these uses. In general, residences are considered most sensitive to noise as people spend extended periods of time in them, including the nighttime hours. Therefore, noise impacts affecting rest and relaxation, sleep, and communication are highest at residential uses. Schools, hotels, hospitals, nursing homes, and recreational uses are also considered to be more sensitive to noise, as activities at these land uses involve rest, recovery, relaxation, and concentration, and increased noise levels tend to disrupt such activities. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate, are also sensitive to noise but, due to the limited time people spend at these uses, impacts are usually tolerable. Commercial and industrial uses are considered the least noise sensitive.

#### Existing Noise Environment

Noise sources are typically categorized as mobile or stationary. Most mobile sources are transportation related from vehicles operating on roadways, fixed railways, and aircraft and airport operations. Off-road construction equipment is also considered a mobile source. Stationary noise sources typically include machinery; fabrication; heating, ventilation, and air conditioning systems; compressors and generators; and landscape maintenance equipment. Stationary noise sources generated by light industrial and commercial activities can result in noise-related land use conflicts when these operations (e.g., loading docks or equipment operations) are adjacent to residential land uses (collocation). The dominant noise sources within San Mateo includes community noise from automobile traffic, most potently from US Highway 101, State Route 92 (SR-92), Interstate 280 (I-280), El Camino Real, Hillsdale Boulevard, and 3<sup>rd</sup> Street, and the Caltrain/Union Pacific (UPRR) rail line.

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### *Existing Community Noise*

Existing community noise conditions in San Mateo were documented during a noise monitoring survey completed in late May and early June 2012. The EIR preparers resurveyed a sampling of several individual noise monitoring locations in November 2022. These noise measurements are representative of typical existing noise exposure during the daytime. Existing noise measurements were taken at 10 locations throughout the city. All measurements were conducted during regular school hours. The sound level meters used (Larson Davis LxT) for noise monitoring satisfy the American National Standards Institute (ANSI) standard for Type 1 instrumentation.<sup>14</sup> The short-term sound level meter was set to “slow” response and “A” weighting (dBA). The meter was calibrated prior to and after the monitoring period. All measurements were at least 5 feet above the ground and away from reflective surfaces. Measurement locations, described below, are shown in Figure 4.11-2, *Existing Noise Measurement Locations*, and the results are reported in Table 4.11-6, *Existing (Baseline) Noise Measurements*.

- **Location 1 (L-1)** was next to 792 E. Poplar Street (San Mateo High School). The measurement location was located approximately 20 feet south of the nearest travel centerline. A 15-minute noise measurement began at 3:16 PM on Thursday, November 17, 2022. The noise environment is characterized primarily by cars traveling. Noise levels generally ranged from 61 dBA to 68 dBA.
- **Location 2 (L-2)** was next to 100 W. Poplar Street (residence). The measurement location was approximately 15 feet east of the nearest southbound travel lane centerline. A 15-minute noise measurement began at 3:50 PM on Thursday, November 17, 2022. The noise environment is characterized primarily by cars traveling. Traffic noise levels generally ranged from 50 dBA to 59 dBA.
- **Location 3 (L-3)** was next to 725 Patricia Avenue (residence). The measurement location was approximately 15 feet east of the nearest northbound travel lane centerline. A 15-minute noise measurement began at 4:18 PM on Thursday, November 17, 2022. The noise environment is characterized primarily by cars passing by as well as highway and train noise. Traffic noise levels generally ranged from 47 dBA to 54 dBA.
- **Location 4 (L-4)** was next to 1405 South Delaware Street (residence). The measurement location was approximately 15 feet east of the nearest southbound travel lane centerline. A 15-minute noise measurement began at 7:39 AM on Friday, November 18, 2022. The noise environment is characterized primarily by cars passing by as well as highway and train noise. Traffic noise levels generally ranged from 63 dBA to 71 dBA.
- **Location 5 (L-5)** was next to 1501 South Norfolk Street (residence). The measurement location was approximately 15 feet east of the nearest northbound travel lane centerline. A 15-minute noise measurement began at 4:47 PM on Thursday, November 17, 2022. The noise environment is characterized primarily by cars passing by as well as highway and train noise. Traffic noise levels generally ranged from 63 dBA to 70 dBA.
- **Location 6 (L-6)** was next to Mariners Island and Armada Way (residence). The measurement location was approximately 15 feet east of the nearest southbound travel lane centerline. A 15-minute noise measurement began at 5:15 PM on Thursday, November 17, 2022. The noise

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<sup>14</sup> Monitoring of ambient noise was performed using Larson-Davis model LxT sound level meters.

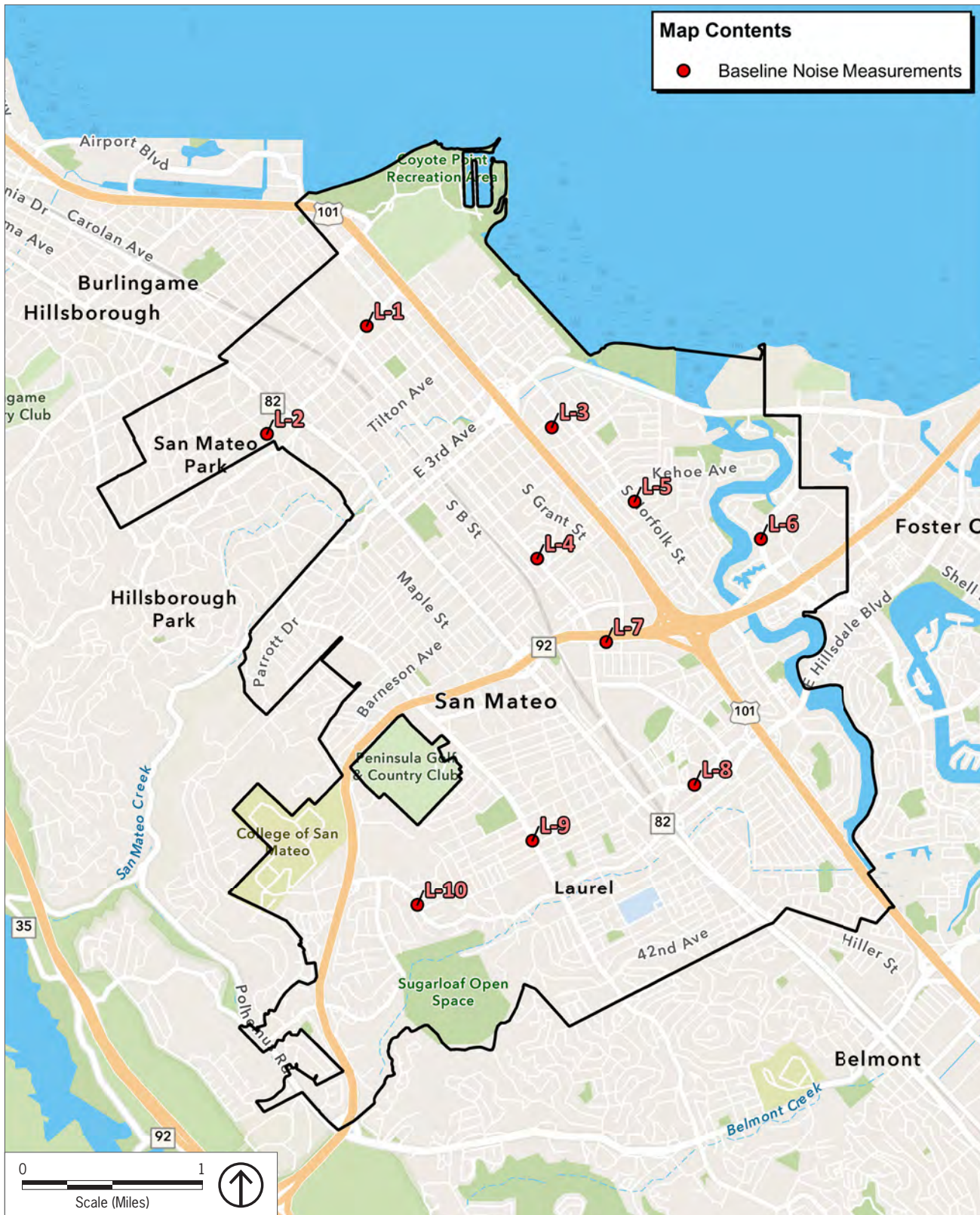
environment is characterized primarily by cars passing by. Traffic noise levels generally ranged from 57 dBA to 71 dBA.

- **Location 7 (L-7)** was next to 512 19<sup>th</sup> Avenue (residence). The measurement location was approximately 15 feet east of the nearest southbound travel lane centerline. A 15-minute noise measurement began at 8:08 AM on Friday, November 18, 2022. The noise environment is characterized primarily by cars passing by and highway noise. Traffic noise levels generally ranged from 66 dBA to 70 dBA.
- **Location 8 (L-8)** was next to Franklin Parkway (residence). The measurement location was approximately 15 feet east of the nearest southbound travel lane centerline. A 15-minute noise measurement began at 8:41 AM on Friday, November 18, 2022. The noise environment is characterized primarily by cars traveling. Traffic noise levels generally ranged from 57 dBA to 70 dBA.
- **Location 9 (L-9)** was next to 506 Alameda de las Pulgas (residence). The measurement location was approximately 15 feet east of the nearest northbound travel lane centerline. A 15-minute noise measurement began at 9:08 AM on Friday, November 18, 2022. The noise environment is characterized primarily by cars traveling. Traffic noise levels generally ranged from 59 dBA to 68 dBA.
- **Location 10 (L-10)** was next to 931 Hillsdale Boulevard (residence). The measurement location was approximately 15 feet east of the nearest westbound travel lane centerline. A 15-minute noise measurement began at 9:53 AM on Friday, November 18, 2022. The noise environment is characterized primarily by cars passing by as well as highway and train noise. Traffic noise levels generally ranged from 57 dBA to 69 dBA.

As shown in Table 4.11-6, the ambient recorded noise levels range from 54.4 dBA to 67.3 dBA  $L_{eq}$  over the course of the 10 short-term noise measurements taken throughout San Mateo from November 17, 2022 to November 18, 2022. As described, the noise environment throughout the city is characterized primarily by automobile noise. Train noise from the rail corridor is another major source of noise in San Mateo.



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Source: Esri, 2023. ECorp Consulting, Inc., 2023.

Figure 4.11-2  
Existing Noise Measurement Locations

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**TABLE 4.11-6 EXISTING (BASELINE) NOISE MEASUREMENTS**

Location Number	Location Description	$L_{eq}$ dBA	$L_{min}$ dBA	$L_{max}$ dBA	Time
1	792 E. Poplar Avenue, across from San Mateo High School	64.0	47.2	74.0	3:16 pm – 3:31 pm (11/17/2022)
2	100 W. Poplar Avenue, approximately 540 feet west of El Camino Real	59.1	39.7	73.6	3:50 pm – 4:05 pm (11/17/2022)
3	725 Patricia Avenue, approximately 200 feet southeast of Dakota Avenue	54.4	44.3	75.4	4:18 pm – 4:34 pm (11/17/2022)
4	1405 S. Delaware Street	67.0	49.0	78.4	7:39 am – 7:54 am (11/18/2022)
5	1501 S. Norfolk Street	66.1	48.7	77.4	4:47 pm – 5:02 pm (11/17/2022)
6	Mariners Island Boulevard / Armada Way Intersection	65.2	46.4	77.5	5:15 pm – 5:30 pm (11/17/2022)
7	512 19 <sup>th</sup> Avenue, approximately 200 feet south of State Route 92	67.3	63.3	76.3	8:08 am – 8:23 am (11/18/2022)
8	Franklin Parkway, south of Franklin Templeton Campus	64.8	43.5	82.6	8:41 am – 8:56 am (11/18/2022)
9	Alameda de las Pulgas / Virginia Avenue Intersection	63.5	47.0	72.6	9:08 am – 9:23 am (11/18/2022)
10	931 W. Hillsdale Boulevard, approximately 175 feet north of Verdun Avenue	61.6	37.5	76.0	9:53 am – 10:08 am (11/18/2022)

Notes:  $L_{eq}$  is the average acoustic energy content of noise for a stated period of time. Thus, the  $L_{eq}$  of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure.  $L_{min}$  is the minimum noise level during the measurement period and  $L_{max}$  is the maximum noise level during the measurement period.

Source: Measurements were taken by PlaceWorks with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. See Appendix D1 of this Draft EIR for noise measurement outputs.

### Existing Traffic Noise

Traffic noise levels depend primarily on the speed of the traffic and the volume of trucks. The primary source of noise from automobiles is high-frequency tire noise, which increases with speed. Trucks and older automobiles produce engine and exhaust noise, and trucks can also generate wind noise. Tire noise from cars is produced at ground level (i.e., where the tire contacts the road), whereas truck noise can be generated at a height of 10 to 15 feet above the road, depending on the height of the exhaust pipe(s) and engine. As a result, sound walls are not as effective at reducing truck noise unless they are very tall.

The dominant noise source within San Mateo is vehicle traffic on its roadways, primarily US Highway 101, SR-92, I-280, El Camino Real, Hillsdale Boulevard, and 3<sup>rd</sup> Street. Existing roadway noise levels were calculated for roadway segments throughout San Mateo. This task was accomplished using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) (see Appendix D2 of this Draft EIR) and traffic volumes from Kittleson Transportation Consultants. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy

## NOISE

truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along these roadway segments are presented in Table 4.11-7, *Existing Roadway Noise Levels*.

**TABLE 4.11-7 EXISTING ROADWAY NOISE LEVELS**

Roadway Segment	Volume (Average Daily Trips)	L <sub>dn</sub> at 50 Feet	Distance to L <sub>dn</sub> Contour (feet)			
			70 dBA	65 dBA	60 dBA	55 dBA
US Highway 101*						
All of San Mateo	217,846	80.3	533 ft	1,686 ft	5,332 ft	16,861 ft
Interstate 280**						
All of San Mateo	93,000	84.7	1,470 ft	4,648 ft	14,699 ft	46,481 ft
State Route 92						
Between City Limits & Mariner’s Island Boulevard	106,668	80.4	549 ft	1,737 ft	5,493 ft	17,372 ft
Between Mariner’s Island Boulevard & US Highway 101 Junction	156,688	84.7	1,462 ft	4,623 ft	14,619 ft	46,230 ft
Between US Highway 101 & El Camino Real	112,404	81.1	648 ft	2,050 ft	6,482 ft	20,497 ft
Between El Camino Real & Alameda de las Pulgas	95,627	79.2	418 ft	1,321 ft	4,179 ft	13,214 ft
Between Alameda de las Pulgas & Hillsdale Boulevard	79,482	78.4	347 ft	1,098 ft	3,473 ft	10,983 ft
Between Hillsdale Boulevard & City Limits	69,948	77.9	306 ft	967 ft	3,047 ft	9,666 ft
1 <sup>st</sup> Avenue						
East of B Street	2,815	57.2	-	-	-	82 ft
West of B Street	1,890	55.4	-	-	-	55 ft
2 <sup>nd</sup> Avenue						
East of B Street	3,525	58.1	-	-	33 ft	103 ft
Between B Street & Ellsworth Avenue	4,138	58.3	-	-	33 ft	106 ft
Between Ellsworth Avenue & San Mateo Drive	4,923	59.6	-	-	45 ft	144 ft
Between San Mateo Drive & El Camino Real	7,698	61.5	-	-	71 ft	225 ft
3 <sup>rd</sup> Avenue						
East of Humboldt Street	18,685	65.4	-	55 ft	172 ft	545 ft
Between Humboldt Street & Delaware Street	8,978	62.2	-	-	83 ft	262 ft
Between Delaware Street & B Street	5,970	60.4	-	-	55 ft	174 ft
Between B Street & Ellsworth Avenue	4,650	59.3	-	-	43 ft	136 ft
Between Ellsworth Avenue & San Mateo Drive	4,895	59.6	-	-	45 ft	143 ft
Between San Mateo Drive & El Camino Real	5,353	59.9	-	-	49 ft	156 ft
4 <sup>th</sup> Avenue						
East of Humboldt Street	20,565	65.8	-	60 ft	190 ft	600 ft

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**TABLE 4.11-7 EXISTING ROADWAY NOISE LEVELS**

Roadway Segment	Volume (Average Daily Trips)	L <sub>dn</sub> at 50 Feet	Distance to L <sub>dn</sub> Contour (feet)			
			70 dBA	65 dBA	60 dBA	55 dBA
Between Humboldt Street & Delaware Street	12,408	63.6	-	36 ft	115 ft	362 ft
Between Delaware Street & B Street	7,348	61.3	-	-	68 ft	214 ft
Between B Street & San Mateo Drive	6,458	60.8	-	-	60 ft	188 ft
Between San Mateo Drive & El Camino Real	5,948	60.4	-	-	55 ft	174 ft
<b>5<sup>th</sup> Avenue</b>						
East of Delaware Street	4,195	58.9	-	-	39 ft	122 ft
Between Delaware Street & B Street	6,380	60.7	-	-	59 ft	186 ft
Between B Street & San Mateo Drive	7,018	61.1	-	-	65 ft	205 ft
Between San Mateo Drive & El Camino Real	7,115	61.2	-	-	66 ft	208 ft
<b>9<sup>th</sup> Avenue</b>						
East of Delaware Street	4,665	59.4	-	-	43 ft	136 ft
Between Delaware Street & B Street	7,923	61.7	-	-	73 ft	231 ft
Between B Street and El Camino Real	5,860	60.3	-	-	79 ft	251 ft
<b>31<sup>st</sup> Avenue</b>						
Between Delaware Street & El Camino Real	5,698	59.2	-	-	42 ft	133 ft
West of El Camino Real	8,600	62.0	-	-	79 ft	251 ft
<b>42<sup>nd</sup> Avenue</b>						
West of El Camino Real	4,750	59.4	-	-	44 ft	139 ft
<b>Alameda de las Pulgas</b>						
Between Crystal Springs Road & 20 <sup>th</sup> Avenue	19,180	67.2	-	83 ft	262 ft	828 ft
Between 20 <sup>th</sup> Avenue & Hillsdale Boulevard	11,735	65.1	-	51 ft	160 ft	506 ft
<b>Concar Drive</b>						
East of Grant Street	6,390	62.0	-	-	80 ft	252 ft
Between Grant Street & Delaware Street	10,175	64.3	-	-	135 ft	427 ft
Between Delaware Street & State Route 92 Ramps	14,735	65.9	-	62 ft	196 ft	619 ft
West of State Route 92 Ramps	2,115	57.2	-	-	-	83 ft
<b>Crystal Springs Road</b>						
West of El Camino Real	5,920	60.4	-	-	55 ft	173 ft
<b>B Street</b>						
North of 1 <sup>st</sup> Avenue	4,285	59.0	-	-	40 ft	125 ft
Between 1 <sup>st</sup> Avenue & 2 <sup>nd</sup> Avenue	4,123	58.8	-	-	38 ft	120 ft

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**TABLE 4.11-7 EXISTING ROADWAY NOISE LEVELS**

Roadway Segment	Volume (Average Daily Trips)	L <sub>dn</sub> at 50 Feet	Distance to L <sub>dn</sub> Contour (feet)			
			70 dBA	65 dBA	60 dBA	55 dBA
Between 2 <sup>nd</sup> Avenue & 3 <sup>rd</sup> Avenue	4,070	58.8	-	-	38 ft	119 ft
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	3,948	58.6	-	-	36 ft	115 ft
Between 4 <sup>th</sup> Avenue & 5 <sup>th</sup> Avenue	3,275	57.8	-	-	-	96 ft
Between 5 <sup>th</sup> Avenue & 9 <sup>th</sup> Avenue	4,228	58.9			39 ft	123 ft
South of 9 <sup>th</sup> Avenue	5,100	59.7			47 ft	149 ft
<b>Baldwin Avenue</b>						
East of El Camino Real	5,070	59.7	-	-	47 ft	148 ft
West of El Camino Real	3,730	58.4	-	-	34 ft	109 ft
<b>Delaware Street</b>						
Between Peninsula Avenue & Poplar Avenue	8,048	61.7	-	-	74 ft	235 ft
Between Poplar Avenue & 3 <sup>rd</sup> Avenue	8,663	62.0	-	-	80 ft	253 ft
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	11,430	63.2	-	33 ft	106 ft	334 ft
Between 4 <sup>th</sup> Avenue & 5 <sup>th</sup> Avenue	9,210	62.3	-	-	85 ft	269 ft
Between 5 <sup>th</sup> Avenue & 9 <sup>th</sup> Avenue	7,535	61.4	-	-	70 ft	220 ft
Between 9 <sup>th</sup> Avenue & 16 <sup>th</sup> Avenue	7,935	61.7	-	-	73 ft	232 ft
Between 16 <sup>th</sup> Avenue & Concar Drive	15,040	65.7	-	59 ft	188 ft	593 ft
Between Concar Drive & 19 <sup>th</sup> Avenue	15,903	66.3	-	67 ft	211 ft	668 ft
Between 19 <sup>th</sup> Avenue & Saratoga Drive	15,398	66.1	-	65 ft	204 ft	646 ft
Between Saratoga Drive & 25 <sup>th</sup> Avenue	12,693	63.7	-	37 ft	117 ft	370 ft
Between 25 <sup>th</sup> Avenue & 28 <sup>th</sup> Avenue	5,950	62.0	-	-	79 ft	250 ft
Between 28 <sup>th</sup> Avenue & 31 <sup>st</sup> Avenue	5,188	59.8	-	-	48 ft	151 ft
South of 31 <sup>st</sup> Avenue	7,160	61.2	-	-	66 ft	209 ft
<b>El Camino Real</b>						
Between Peninsula Avenue & Poplar Avenue	23,985	69.2	-	133 ft	419 ft	1,327 ft
Between Poplar Avenue & Tilton Avenue	27,448	69.8	48 ft	152 ft	480 ft	1,518 ft
Between Tilton Avenue & Crystal Springs Road	28,750	70.0	50 ft	159 ft	503 ft	1,590 ft
Between Crystal Springs Road & 2 <sup>nd</sup> Avenue	26,540	69.7	46 ft	147 ft	464 ft	1,468 ft

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**TABLE 4.11-7 EXISTING ROADWAY NOISE LEVELS**

Roadway Segment	Volume (Average Daily Trips)	L <sub>dn</sub> at 50 Feet	Distance to L <sub>dn</sub> Contour (feet)			
			70 dBA	65 dBA	60 dBA	55 dBA
Between 2 <sup>nd</sup> Avenue & 3 <sup>rd</sup> Avenue	31,933	71.4	69 ft	219 ft	694 ft	2,194 ft
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	32,695	71.5	71 ft	225 ft	710 ft	2,246 ft
Between 4 <sup>th</sup> Avenue & Barneson Avenue	33,883	71.7	74 ft	233 ft	736 ft	2,328 ft
Between Barneson Avenue & 17 <sup>th</sup> Avenue	34,083	71.7	74 ft	234 ft	741 ft	2,342 ft
Between 17 <sup>th</sup> Avenue & 20 <sup>th</sup> Avenue	39,148	72.3	85 ft	269 ft	851 ft	2,690 ft
Between 20 <sup>th</sup> Avenue & 25 <sup>th</sup> Avenue	30,245	71.2	66 ft	208 ft	657 ft	2,078 ft
Between 25 <sup>th</sup> Avenue & 28 <sup>th</sup> Avenue	31,423	71.4	68 ft	216 ft	683 ft	2,159 ft
Between 28 <sup>th</sup> Avenue & 31 <sup>st</sup> Avenue	31,030	71.4	69 ft	218 ft	691 ft	2,185 ft
Between 31 <sup>st</sup> Avenue & Hillsdale Boulevard Ramps	15,570	68.5	-	113 ft	356 ft	1,125 ft
Between Hillsdale Boulevard Ramps & 41 <sup>st</sup> Avenue	16,180	68.2	-	104 ft	330 ft	1,044 ft
Between 41 <sup>st</sup> Avenue & 42 <sup>nd</sup> Avenue	26,178	70.3	-	168 ft	534 ft	1,689 ft
<b>Ellsworth Avenue</b>						
North of 2 <sup>nd</sup> Avenue	5,055	59.7	-	-	47 ft	148 ft
Between 2 <sup>nd</sup> Avenue & 3 <sup>rd</sup> Avenue	3,783	58.4	-	-	35 ft	110 ft
South of 3 <sup>rd</sup> Avenue	3,025	57.5	-	-	-	88 ft
<b>Fashion Island Boulevard/Bridgepointe Parkway</b>						
Between Chess Drive & Baker Way	11,320	62.6	-	-	91 ft	289 ft
Between Baker Way & Mariner's Island Boulevard	14,590	65.5	-	-	178 ft	563 ft
Between Mariner's Island Boulevard & Norfolk Street	16,203	65.1	-	52 ft	164 ft	517 ft
Between Norfolk Street & US Highway 101 Ramps	18,260	65.3	-	54 ft	170 ft	538 ft
<b>Franklin Parkway</b>						
Between Saratoga Drive & Delaware Street	5,508	60.5	-	-	-	143 ft
<b>Hillsdale Boulevard</b>						
East of Norfolk Street	35,120	71.8	76 ft	241 ft	763 ft	2,413
Between Norfolk Street & US Highway 101 Ramps	41,595	69.8	-	151 ft	477 ft	1,507 ft
Between US Highway 101 Ramps & Saratoga Drive	26,695	70.6	-	183 ft	580 ft	1,834 ft
Between Saratoga Drive & El Camino Real	19,630	68.4	-	109 ft	343 ft	1,086 ft



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**TABLE 4.11-7 EXISTING ROADWAY NOISE LEVELS**

Roadway Segment	Volume (Average Daily Trips)	L <sub>dn</sub> at 50 Feet	Distance to L <sub>dn</sub> Contour (feet)			
			70 dBA	65 dBA	60 dBA	55 dBA
Between El Camino Real & Alameda de las Pulgas	9,988	64.2	-	-	133 ft	419 ft
Between Alameda de las Pulgas & Campus Drive	10,978	62.1	-	-	81 ft	256 ft
<b>Humboldt Street</b>						
Between Peninsula Avenue & Poplar Avenue	8,378	61.9	-	-	77 ft	245 ft
Between Poplar Avenue & 3 <sup>rd</sup> Avenue	8,138	61.8	-	-	75 ft	238 ft
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	6,698	60.9	-	-	62 ft	196 ft
South of 4 <sup>th</sup> Avenue	5,465	60.0	-	-	50 ft	160 ft
<b>Mariner's Island Boulevard</b>						
Between 3 <sup>rd</sup> Avenue & Fashion Island Boulevard	8,885	62.6	-	-	91 ft	287 ft
South of Fashion Island Boulevard	18,335	65.7	-	59 ft	187 ft	592 ft
<b>Norfolk Street</b>						
North of 3 <sup>rd</sup> Avenue	7,640	61.5	-	-	71 ft	223 ft
Between 3 <sup>rd</sup> Avenue & Kehoe Avenue	10,615	62.9	-	-	98 ft	310 ft
Between Kehoe Avenue & Fashion Island Boulevard	10,250	62.8	-	-	95 ft	299 ft
Between Fashion Island Boulevard & El Camino Real	9,773	62.8	-	-	96 ft	304 ft
<b>Peninsula Avenue</b>						
Between Bayshore Boulevard & Humboldt Street	21,120	67.5	-	89 ft	280 ft	887 ft
Between Humboldt Street & Delaware Street	15,928	64.8	-	48 ft	150 ft	475 ft
Between Delaware Street & San Mateo Drive	13,915	64.2	-	42 ft	131 ft	415 ft
Between San Mateo Drive & El Camino Real	5,720	60.3	-	-	54 ft	171 ft
<b>Poplar Avenue</b>						
Between US Highway 101 & Humboldt Street	10,135	61.7	-	-	75 ft	236 ft
Between Humboldt Street & Delaware Street	7,823	60.6	-	-	58 ft	182 ft
Between Delaware Street & San Mateo Drive	5,978	59.5	-	-	44 ft	139 ft
Between San Mateo Drive & El Camino Real	6,865	60.1	-	-	51 ft	160 ft
<b>San Mateo Drive</b>						
Between Peninsula Avenue & Poplar Avenue	12,250	64.9	-	49 ft	156 ft	494 ft

## NOISE

**TABLE 4.11-7 EXISTING ROADWAY NOISE LEVELS**

Roadway Segment	Volume (Average Daily Trips)	L <sub>dn</sub> at 50 Feet	Distance to L <sub>dn</sub> Contour (feet)			
			70 dBA	65 dBA	60 dBA	55 dBA
Between Poplar Avenue & 2 <sup>nd</sup> Avenue	10,583	62.9	-	-	98 ft	309 ft
Between 2 <sup>nd</sup> Avenue & 3 <sup>rd</sup> Avenue	5,273	59.9	-	-	49 ft	154 ft
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	4,700	59.4	-	-	43 ft	137 ft
Between 4 <sup>th</sup> Avenue & 5 <sup>th</sup> Avenue	3,693	58.3	-	-	34 ft	108 ft
<b>Saratoga Drive</b>						
Between Delaware Street & Franklin Parkway	9,315	64.1	-	-	127 ft	402 ft
Between Franklin Parkway & Hillsdale Boulevard	12,065	63.9	-	-	123 ft	389 ft
Between Hillsdale Boulevard & Santa Clara Way	7,140	60.6	-	-	58 ft	182 ft
<b>Tilton Avenue</b>						
East of El Camino Real	4,650	59.3	-	-	43 ft	136 ft

Notes:

\* Modeled noise calculations adjusted to account for ten feet high sound walls adjacent to US Highway 101 as it traverses San Mateo.

\*\* The nearest segment of Interstate 280 to San Mateo traverses approximately 2,150 feet distant.

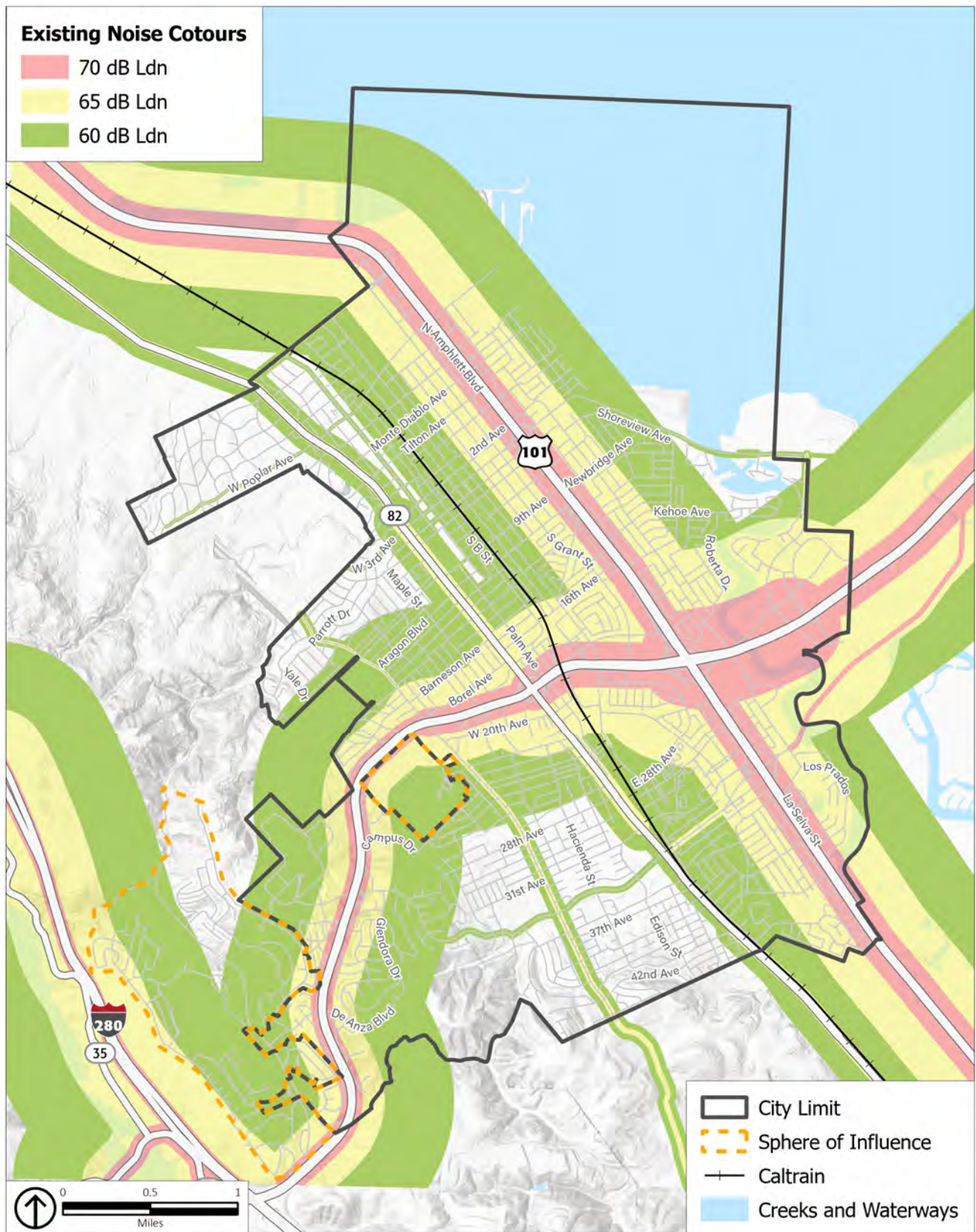
Source: Traffic noise levels on all San Mateo roadways were calculated using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by Kittelson and Associates. US Highway 101, Interstate 280, and State Route 92 trip generation rates are identified by the California Department of Transportation Traffic Census Program (2023). Refer to Appendix D2 for traffic noise modeling assumptions and results.

Existing noise contours for the freeways and major arterials within the city are presented in Figure 4.11-3, *Existing Traffic Noise Contours*. The noise contours shown in Figure 4.11-3 represent the predicted noise level based on roadway volumes, the percent of trucks, speed, and other factors.

### *Existing Rail Noise*

Railway noise is also a major mobile noise source throughout the city. The Caltrain/UPRR rail line (rail corridor) runs adjacent to El Camino Real in the southern portion of the city and jogs east slightly at Hillsdale Boulevard and runs along the western border of Bay Meadows. North of Bay Meadows, the tracks run adjacent to Railroad Avenue until the northern portion of the city, where they traverse between North San Mateo Drive and North Claremont Street. Currently, there are 104 Caltrain commuter trains that pass through San Mateo each weekday, and 32 on weekend days. While freight train traffic is limited, there are typically up to three freight trains per day traversing the city. Noise levels for the rail line were calculated using the methodology contained in the Federal Transit Administration's Transit Noise and Vibration Impact Assessment manual. It was assumed that the train's warning horn was blown within ¼ mile of all grade crossings and stations. Due to the numerous grade crossings and stations in San Mateo, the train horn dominates the existing train noise contours shown in Figure 4.11-4, *Existing Railway Noise Contours*.

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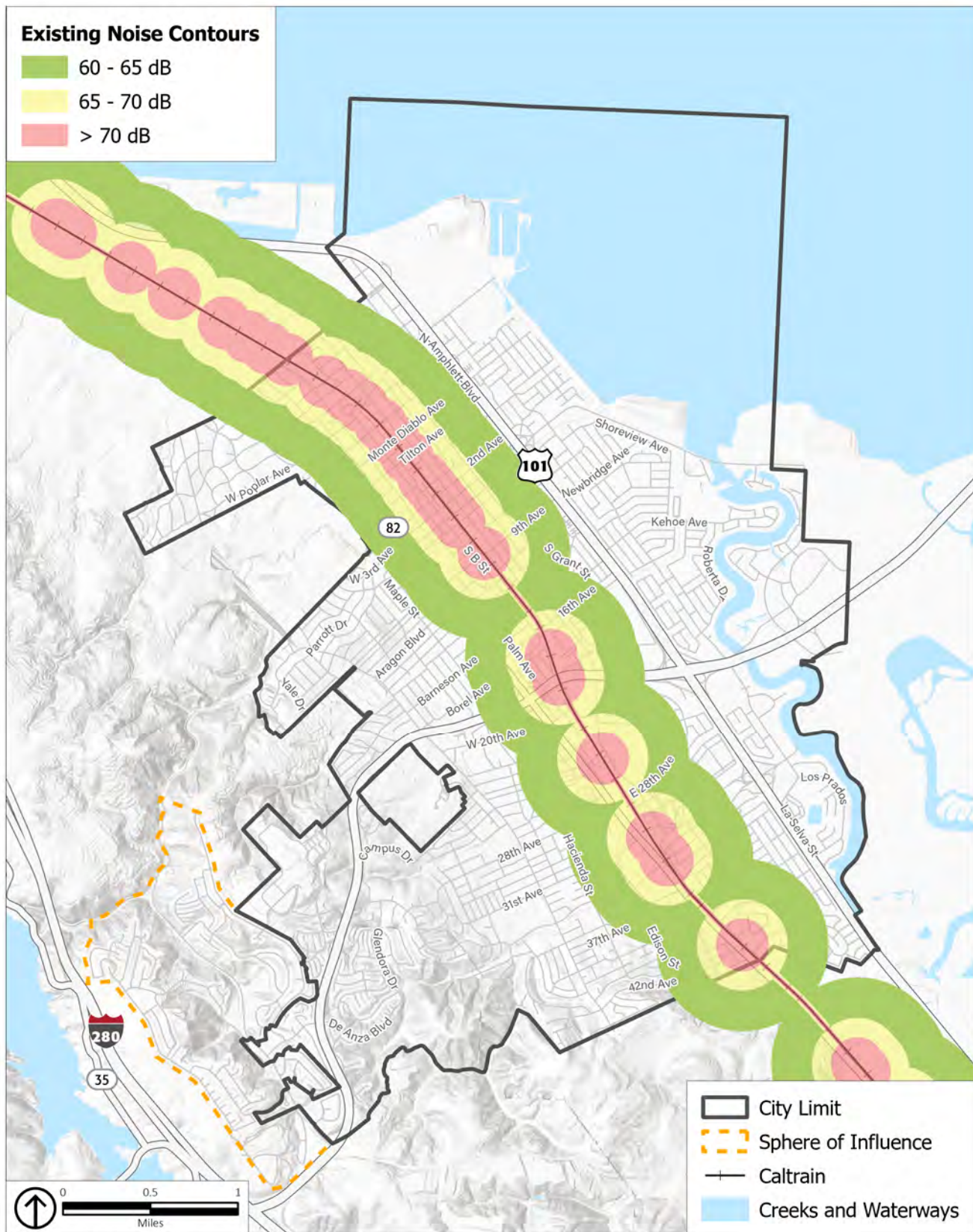


Source: ECORP, 2023; PlaceWorks, 2023.

Figure 4.11-3  
Existing Traffic Noise Contours



# NOISE



Source: ECorp, 2023; PlaceWorks, 2023.

Figure 4.11-4  
Existing Railway Noise Contours

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### *Existing Aircraft Noise*

The northeastern part of the city is somewhat affected by aircraft activity due to nearby San Francisco International Airport. Typically, aircraft are on approach (i.e., landing) over San Francisco Bay just to the east of San Mateo. The city is located outside of the Airport's 65 dBA CNEL noise contour.

### 4.11.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant noise impact if it would:

1. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Generate excessive groundborne vibration or groundborne noise levels.
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.
4. In combination with past, present, and reasonably foreseeable projects, result in cumulative noise impacts in the area.

A project might have a significant effect on the environment if it would substantially increase the ambient noise levels in the area or expose people to severe noise levels. As previously described, a change in level of at least 5 dBA is required before any noticeable change in community response is expected. Based on this fact and the proposed Noise Element policies, a significant increase in traffic noise is considered to be an increase in the existing ambient noise environment of at least 5 dBA  $L_{dn}$ . Based on SMMC Chapter 7.30, an individual project would also be considered to have a significant impact if its on-site noise sources generate noise levels above the stationary-source standards identified in Table 4.11-4.

Noise-sensitive receivers include residences, multifamily common open-space areas, schools, hotels, hospitals, nursing homes, and recreational uses.

### 4.11.3 IMPACT DISCUSSION

This is a program-level EIR that considers the potential impacts from adoption of the proposed project by assessing proposed policies contained in the proposed project and development and activities that may occur under the proposed project. Impacts relative to noise and vibration are evaluated using the criteria listed above and based on information included in the proposed General Plan, including the proposed land use map, and existing and future traffic volumes provided by Kittleson Transportation Consultants. The proposed project does not propose specific development projects but, for the purposes of environmental review, establishes the potential buildout of the proposed project. This represents the maximum feasible development that the City has projected can reasonably be expected to occur through the proposed General Plan horizon of 2040. To capture the potential impact of future development under the proposed project, this Draft EIR utilizes the baseline existing conditions described above and

analyzes the impacts of urban development through the projection period ending in 2040. Roadside noise levels were calculated for the same roadways analyzed for the transportation analysis in Chapter 4.15, *Transportation*, of this Draft EIR. The street segments selected for analysis are those forecast to experience the greatest percentage increase in traffic generated by future development under the proposed project and are therefore expected to be most directly impacted. Transportation-source noise levels have been calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with traffic counts provided by Kittleson Transportation Consultants. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels.

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<b>NOISE-1</b>	<b>The proposed project would result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</b>
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## Noise/Land Use Compatibility

The Noise (N) Element of the proposed General Plan provides policy direction for minimizing noise impacts on the community and establishes noise control measures for construction and operation of land use projects. By identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noises (Table N-1 of the proposed General Plan Noise Element), noise considerations would influence the general distribution, location, and intensity of future land uses. The result is that effective land use planning and project design can alleviate the majority of noise problems. However, future infill development in San Mateo under the proposed project will be focused primarily in ten General Plan Land Use Study Areas, which are concentrated around existing transit and services, including near major noise sources such as US Highway 101, SR 92, El Camino Real and the Caltrain tracks.

The most basic planning strategy to minimize adverse impacts on new land uses due to noise is to avoid designating certain land uses at locations in the city that would negatively affect noise-sensitive land uses. Uses such as schools, hotels, hospitals, nursing homes, recreational uses, churches, libraries, cemeteries, and all types of residential uses must be located outside of any area anticipated to exceed acceptable noise levels as defined by the Noise-Sensitive Land Use Compatibility Guidelines or must be protected from noise through sound attenuation measures such as site and architectural design and sound walls. The proposed guidelines are used as a basis for planning decisions and these guidelines are shown in Table N-1 of the proposed General Plan 2040 Noise Element, which is reproduced as Table 4.11-8, *Proposed General Plan Noise-Sensitive Land Use Compatibility Guidelines*.



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**TABLE 4.11-8 PROPOSED GENERAL PLAN NOISE-SENSITIVE LAND USE COMPATIBILITY GUIDELINES**

Land Use Category of Proposed New Use		Day-Night Average Exterior Noise Level, $L_{dn}$ (dBA)				
		0 - 59	60 - 65	66 - 70	71 - 80	over 81
Noise Sensitive Land Uses	Residential (all densities) *					
	Multi-family Common Open Space for Residents					
	Hotels, Motels, and Other Lodging					
	Schools, Libraries, Hospitals, Churches, Long-Term Care Facilities					
	Parks, Playgrounds, Privately Owned Publicly Accessible Open Space					
	Office and Commercial					
Research and Development, Industrial						
		<b>Normally Acceptable.</b> Specified land use is satisfactory based on the assumption that any buildings involved are of normal, conventional construction, without any special noise mitigation requirements.				
		<b>Conditionally Acceptable.</b> New construction or development should be undertaken only after a detailed analysis of the noise-reduction requirement is made and needed noise mitigation features have been included in the design.				
		<b>Normally Unacceptable.</b> New construction or development should not be undertaken.				

\* See residential land use designations in the Land Use Element of this General Plan.

Source: City of San Mateo, Proposed Strive General Plan 2040, Table N-1.

Table N-1 of the proposed General Plan would be used to determine whether the existing exterior noise levels that would surround a proposed new use are acceptable or unacceptable and to identify where a proposed project may need to incorporate noise mitigation features. In a case where the noise levels identified at a future project site fall within levels considered normally acceptable, the project would be considered compatible with the existing noise environment. All future projects under the proposed project subject to discretionary review would be evaluated for noise/land use compatibility.

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The Noise (N) Element of the proposed General Plan provides guidance to protect the community from excessive noise exposure. The following General Plan 2040 goals, policies, and actions would integrate noise considerations into land use planning decisions and require design strategies for minimize noise effects:

- **Goal N-1:** Protect noise-sensitive land uses from excessive noise levels.
  - **Policy N 1.1: Noise and Land Use Planning.** Integrate noise considerations into land use planning decisions to minimize noise impacts to or from new development.
  - **Policy N 1.2: Interior Noise Level Standard.** Require submittal of an acoustical analysis and interior noise insulation for all noise-sensitive land uses listed in Table N-1 [of the proposed General Plan] that have an exterior noise level of 60 dBA (Ldn) or above, as shown on Figure N-2 [of the proposed General Plan]. The maximum interior noise level shall not exceed 45 dBA (Ldn) in any habitable rooms, as established by the California Building Code.
  - **Policy N 1.3: Exterior Noise Level Standard for Residential Uses.** Require an acoustical analysis for new multifamily common open space for residents that have an exterior noise level of 60 dBA (Ldn) or above, as shown on Figure N-2 [of the proposed General Plan]. Incorporate necessary mitigation measures into residential project design to minimize common open space noise levels. Maximum exterior noise should not exceed 65 dBA (Ldn) for residential uses and should not exceed 65 dBA (Ldn) for public park uses.
- **Goal N-2:** Minimize unnecessary, annoying, or unhealthful noise.
  - **Policy N 2.2: Minimize Noise Impacts.** Incorporate necessary mitigation measures into new development design to minimize short-term noise impacts. Determine whether new development has the potential to result in a significant noise impact on existing development based on the following standards. Impacts will be analyzed based on long-term operational noise increases at the sensitive receptor property line, or new uses that generate noise levels at the sensitive receptor property line, as follows:

<b>L<sub>dn</sub> Category of Existing Development Per Figures N-1, N-2, and/or N-3 [of the proposed General Plan]</b>	<b>Noise Increase Considered “Significant” over Existing Noise Levels</b>
Normally Acceptable	An increase of more than 5 dBA and the total Ldn exceeds the “normally acceptable” category
Conditionally Acceptable	An increase of more than 5 dBA
Unacceptable	An increase of more than 5 dBA

- **Policy N 2.3: Minimize Commercial Noise.** Protect land uses other than those listed as “noise sensitive” in Table N-1 [of the proposed General Plan] from adverse impacts caused by the on-site noise generated by new developments. Incorporate necessary mitigation measures into development design to minimize short-term and long-term noise impacts. Prohibit new uses that generate noise levels of 65 dBA (Ldn) or above at the property line, excluding existing ambient noise levels.

Proposed General Plan Policy N 1.1 would require the integration of noise considerations into land use planning decisions to minimize new noise impacts to or from new development. Proposed Policy N 1.2 would require the submittal of an acoustical analysis and interior noise insulation for all “noise sensitive” land uses that are determined to likely have an exterior noise level of 60 dBA L<sub>dn</sub> or above, as shown on

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Figure N-2 of the General Plan (see Figure 4.11-5, *Future Traffic Noise Contours*). Additionally, Table 4.11-11, *Future (General Plan Buildout) Roadway Noise Levels*, shows roadway noise contours in tabular format. Similarly, proposed Policy N 1.3 would require the submittal of an acoustical analysis for all new multifamily common open space that have an exterior noise level of 60 dBA  $L_{dn}$  or above, as shown on Figure N-2 of the General Plan (Figure 4.11-5 of this chapter).

The acoustical analyses potentially triggered by these proposed policies at the project level would include refined evaluation of noise/land use compatibility in order to more precisely identify the existing ambient noise environment affecting the subject site, typically achieved through conducting baseline noise measurements with a sound level meter, though this can also be achieved in many areas of the city by referring to Figure N-2 of the General Plan (Figure 4.11-5 of this chapter) and/or Table 4.11-11 of this chapter. The location-specific baseline noise measurements presented in the acoustical analyses either demonstrate the noise/land use compatibility between a proposed land use and location or assist with the characterization of the ambient noise environment in a manner that allows for implementation of the appropriate noise attenuation measures necessary to protect the new noise-sensitive land use. Examples of noise attenuation measures include adding buffers and/or landscaped earth berms between the receptor and the source of noise, orienting windows and outdoor living areas away from unacceptable noise exposure, architectural design, and/or incorporating state-of-the-art structural sound attenuation and setbacks. The need for noise attenuation measures in building construction and project design from any noise source and for all land uses will be determined on a project-by-project basis at the time development is proposed.

Further, proposed General Plan Policy N 2.2 would require that projects generating a noise increase of 5 dBA, the minimum increase that is perceptible, incorporate mitigation measures into new development design to minimize short-term noise impacts. Proposed Policy N 2.3, which seeks to protect land uses generally not considered to be noise-sensitive, prohibits new uses that generate noise levels of 65 dBA  $L_{dn}$  or above at the property lines of commercial land uses.

For these reasons, noise/land use compatibility under the General Plan would represent a *less than significant* impact.

### Temporary Construction Noise

Under the proposed project, the primary source of temporary noise within the city would be demolition and construction activities associated with development projects and activities. Construction activities would involve both off-road construction equipment (e.g., excavators, dozers, cranes, etc.) and transport of workers and equipment to and from construction sites. Table 4.11-9, *Reference Construction Equipment Noise Levels (50 Feet from Source)*, shows typical noise levels produced by the types of off-road equipment that would likely be used during future construction within San Mateo. It is noted that future development under the proposed project could potentially require installation of pile foundations that may utilize impact pile drivers or similar equipment that may be expected to generate high noise levels.

Construction noise is currently a major source of temporary noise within San Mateo and would continue to be so regardless of whether the proposed project is adopted. Noise levels near individual construction

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sites associated with development and activities under the proposed project would not be substantially different from what they would be under the existing City of San Mateo 2030 General Plan and current CAP. Since specific future projects within the city are unknown at this time, it is conservatively assumed that the construction areas associated with these future projects could be located within 50 feet of sensitive land uses. As depicted in Table 4.11-9, noise levels generated by individual pieces of construction equipment typically range from approximately 74 dBA to 101.3 dBA  $L_{max}$  at 50 feet and 67.7 dBA to 94.3 dBA  $L_{eq}$  at 50 feet. Average hourly noise levels associated with construction projects can vary, depending on the activities performed. Short-term increases in vehicle traffic, including worker commute trips and haul truck trips, may also result in temporary increases in ambient noise levels at nearby receptors. During each stage of construction, a different mix of equipment would operate, and noise levels would vary based on the amount of equipment on-site and the location of the activity. Construction noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and the receptor. Intervening structures or terrain would result in lower noise levels at distant receivers.

**TABLE 4.11-9 REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS (50 FEET FROM SOURCE)**

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	$L_{max}$	$L_{eq}$
Aerial Lift	74.7	67.7
Air Compressor	77.7	73.7
Backhoe	77.6	73.6
Blasting	94.0	73.0
Boring Jack (Power Unit)	83.0	80.0
Boring Jack (Horizontal)	82.0	76.0
Chain Saw	83.7	76.7
Compactor (Ground)	83.2	76.2
Concrete Mixer Truck	78.8	74.8
Concrete Mixer (Vibratory)	80.0	73.0
Concrete Pump Truck	81.4	79.4
Concrete Saw	89.9	82.6
Crane	80.6	72.6
Dozer	81.7	77.7
Drill Rig	84.4	77.4
Drill Rig Truck	79.1	72.2
Drum Mixer	80.0	77.0
Dump Truck	76.5	72.5
Excavator	80.7	76.7
Front End Loader	79.1	75.1
Generator	80.6	77.6
Gradall	83.4	79.4
Grader	85.0	81.0
Hydraulic Break Ram	90.0	80.0
Impact Hammer/Hoe Ram (Mounted)	90.3	83.3

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**TABLE 4.11-9 REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS (50 FEET FROM SOURCE)**

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	$L_{max}$	$L_{eq}$
Jackhammer	88.9	81.9
Other Equipment	85.0	82.0
Pavement Scarifier	89.5	82.5
Paver	77.2	74.2
Pile Driver (Impact)	101.3	94.3
Pile Driver (Vibratory)	100.8	93.8
Pneumatic Tools	85.2	82.2
Pumps	80.9	77.9
Rock Drill	81.0	74.0
Roller	80.0	73.0
Scraper	83.6	79.6
Tractor	84.0	80.0
Truck (Flat Bed)	74.3	70.3
Truck (Pick Up)	75.0	71.0
Vacuum Street Sweeper	81.6	71.6
Welder	74.0	70.0

Source: Federal Highway Administration, 2006, Roadway Construction Noise Model.

SMMC Section 7.30.060 exempts construction noise from noise standards so long as construction activities are restricted to weekdays between the hours of 7:00 a.m. and 7:00 p.m., on Saturdays between the hours of 9:00 a.m. and 5:00 p.m., and on Sundays and holidays between the hours of noon and 4:00 p.m.; and that the construction noise level at any point outside of the construction site does not exceed 90 dBA. It is common for cities to regulate construction noise in this manner because construction noise is temporary, short term, and intermittent in nature, and ceases upon completion of construction. Furthermore, the Noise (N) Element of the proposed General Plan addresses construction noise as follows:

- **Goal N-2:** Minimize unnecessary, annoying, or unhealthful noise
  - **Policy N 2.7: Construction Noise and Vibration Monitoring.** Require construction noise limits and vibration monitoring around sensitive receptors, including through limiting construction hours and individual and cumulative noise from construction equipment. For larger development projects that demand intensive construction periods and/or use equipment that could create vibration impacts, require a vibration impact analysis, as well as monitoring and reporting of noise/vibration levels throughout construction, consistent with industry standards.

Through implementation of proposed General Plan Policy N 2.7, the City would require construction noise limits around sensitive receptors, including through limiting construction hours, consistent with the SMMC, and individual and cumulative noise from construction equipment. For larger development projects that demand intensive construction periods and/or use equipment that could create vibration

impacts, proposed Policy N 2.7 requires a vibration impact analysis, as well as monitoring and reporting of noise/vibration levels throughout construction.

SMMC Section 7.30.060 and the proposed General Plan goal and policy identified above would ensure that noise attenuation is provided to minimize temporary noise impact associated with construction. Construction noise under the proposed project would therefore be *less than significant*.

## Stationary Source Noise

The development of residential, automotive, industrial, or other uses and activities under the proposed project could generate substantial stationary noise. Such sources could generate noise from heating, ventilation, and air conditioning (HVAC) mechanical equipment, back-up diesel generators in some cases, parking lot activity, backup beepers from internal truck and equipment maneuvering, and other sources. Table 4.11-10, *Reference Stationary Source Noise Levels (At the Source)*, identifies noise levels generally associated with common stationary noise sources.<sup>15</sup>

**TABLE 4.11-10 REFERENCE STATIONARY SOURCE NOISE LEVELS (AT THE SOURCE)**

Stationary Noise Source	L <sub>eq</sub>
Commercial Car Wash <sup>a</sup>	79.1 dBA
Drive Thru Activity (speaker) <sup>b</sup>	89.1 dBA
Gasoline Dispensing Station <sup>c</sup>	64.7 dBA
Generators <sup>d</sup>	75.0 dBA
HVAC Mechanical Equipment <sup>e</sup>	56.8 dBA
Parking Garage <sup>f</sup>	52.6 dBA
Regional Shopping Center Parking Lot <sup>g</sup>	61.1 dBA
Small Parking Lot <sup>h</sup>	53.2 dBA
Tire and Lube Service Station <sup>i</sup>	62.3 dBA
Truck Backup Beeper <sup>j</sup>	79.0 dBA
Truck Yard/Warehouse <sup>k</sup>	62.4 dBA

Notes: a. The average of two noise measurements conducted at commercial carwashes in 2019 and 2022.

b. The average of six noise measurements conducted within fast food restaurant drive thru while drive thru speaker in use.

c. The average of five noise measurements conducted within the fuel canopy of gasoline dispensing stations in 2019 and 2021.

d. Generac Mobile Diesel Generator Set Specification Sheet 2020.

e. One noise measurement conducted at an operating HVAC unit in 2017.

f. One noise measurement conducted within a parking garage in 2019.

g. One noise measurement conducted within a Safeway parking lot in 2019.

h. The average of three noise measurements conducted within a strip mall parking lot in 2022, hotel parking lot in 2021, and medical facility parking lot in 2020.

i. The average of two noise measurements conducted at a Big O Tires in 2019 and a Jiffy Lube in 2022.

j. City of San Jose 2014 Midpoint at 237 Loading Dock Noise Study.

k. The average of five noise measurements conducted at four truck yards and one distribution center in 2021.

<sup>15</sup> Many of the sources were measured for their sound power output with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator.



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Stationary source noise is currently a major source of temporary noise within the EIR Study Area and would continue to be so regardless of whether the proposed project is adopted. Noise levels near individual sources under the proposed project would not be substantially different from what they would be under the existing City of San Mateo General Plan 2030 and current CAP. As previously described, SMMC Chapter 7.30 establishes regulations to protect the inhabitants of the city against all forms of nuisances, including stationary source noise, as shown in Table 4.11-4. Future development under the proposed project, and associated on-site stationary source noise, would be subject to the noise standards identified in Table 4.11-4. Stationary sources of noise that are identified as exceeding the noise standards established by SMMC Chapter 7.30 would be required to implement noise-reduction measures in order to reduce their noise to acceptable levels. Additionally, the Noise (N) Element of the proposed General Plan addresses stationary noise as follows:

- **Goal N-1:** Protect noise-sensitive land uses from excessive noise levels.
  - **Policy N 1.5: Inclusive Outreach.** Notify the community when new land uses that would result in excessive noise levels are being considered and inform community members about how they can engage in the process. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.
- **Goal N-2:** Minimize unnecessary, annoying, or unhealthful noise.
  - **Policy N 2.3: Minimize Commercial Noise.** Protect land uses other than those listed as “noise sensitive” in Table N-1 [of the proposed General Plan] from adverse impacts caused by the on-site noise generated by new developments. Incorporate necessary mitigation measures into development design to minimize short-term and long-term noise impacts. Prohibit new uses that generate noise levels of 65 dBA (Ldn) or above at the property line, excluding existing ambient noise levels.

With adherence to SMMC Chapter 7.30 and the proposed General Plan goals and policies identified above, future development and activities under the proposed project would result in a *less-than-significant* impact related to stationary noise sources.

## Rail Noise

As previously described, railway noise is a major mobile noise source in the EIR Study Area (see Figure 4.11-4). The Caltrain/UPRR rail line runs adjacent to El Camino Real in the southern portion of the city and jogs east slightly at Hillsdale Boulevard and runs along the western border of Bay Meadows. North of Bay Meadows, the tracks run adjacent to Railroad Avenue until the northern portion of the city, where they traverse between North San Mateo Drive and North Claremont Street. Currently, there are 104 Caltrain commuter trains that pass through San Mateo each weekday, and 32 on weekend days. While freight train traffic is limited, there are typically up to three freight trains per day traversing San Mateo.

Noise levels along the existing railroad and light rail corridors under the proposed General Plan would remain the same as existing conditions; any changes to the frequency of trains or to train equipment would be initiated and implemented by the respective rail authority, rather than the City of San Mateo, and are not part of the proposed project. However, implementation of the proposed project has the potential to locate new development along the rail line.

The Noise (N) Element of the proposed General Plan addresses rail noise as follows:

- **Goal N-2:** Minimize unnecessary, annoying, or unhealthful noise.
  - **Policy N 2.5: Railroad Noise.** Support the installation of noise barriers and other mitigations along the railroad corridor where noise-sensitive land uses are adversely impacted by excessive noise levels (60 dBA [Ldn] or greater), as shown in Figure N-3. [of the proposed General Plan].
  - **Action N 2.9: Railroad Noise Reductions.** Implement projects necessary to achieve Quiet Zones in the city, such as elimination of at-grade rail crossings or other mitigation measures to decrease horn and other operational noise levels, with a focus on achieving Quiet Zones as part of any substantial expansions of the rail service.
  - **Action N 2.10: Railroad Noise Barriers.** Work with the Peninsula Corridor Joint Powers Board to promote and encourage adequate noise mitigations and barriers to be incorporated into any rail service expansion or track realignment.

Additionally, as previously described, the most basic planning strategy to minimize adverse impacts on new land uses due to noise is to avoid designating certain land uses at locations in the city that would negatively affect noise-sensitive land uses. Uses such as schools, hotels, hospitals, nursing homes, recreational uses, churches, libraries, cemeteries, and all types of residential uses must be located outside of any area anticipated to exceed acceptable noise levels as defined by the Noise-Sensitive Land Use Compatibility Guidelines (see Table 4.11-8) or must be protected from noise through sound attenuation measures such as site and architectural design and sound walls. All future development projects subject to discretionary review under the proposed project would be evaluated for noise/land use compatibility, including railway noise/land use compatibility. Proposed General Plan Policies N 1.1 and N 1.2 would require the integration of noise considerations into land use planning decisions to minimize new noise impacts to or from new development. Proposed Policies N 1.1 and N 1.2 provide a strong policy framework for minimizing noise impacts, including railway-related noise impacts, in new development.

No aspect of the proposed project would increase railway noise levels along the existing railroad and light rail corridors. Adherence to proposed General Plan goal, policies, and actions identified above would ensure that the noise environment in San Mateo does not increase in a manner that worsens existing land use compatibility or exposes noise-sensitive land uses to “unacceptable” noise levels. Therefore, this impact is *less than significant*.

## Traffic Noise

Future development and activities under the proposed project are expected to affect the community noise environment mainly by generating additional traffic. Transportation-source noise levels were calculated for this EIR using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with traffic counts provided by Kittleson Transportation Consultants. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy

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truck noise is 0.3 to 3.0 dBA lower than national levels. As previously described, a 5-dBA change is required before any noticeable change in community response is expected. Based on this fact, a significant increase in traffic noise is considered to be an increase in the existing ambient noise environment of at least 5 dBA  $L_{dn}$ .

Future traffic noise contours are mapped in Figure 4.11-5, *Future Traffic Noise Contours*. Table 4.11-11, *Future (General Plan Buildout) Roadway Noise Levels*, shows the calculated off-site roadway noise levels under existing traffic levels compared to future buildout under the proposed project.

As shown in Table 4.11-11, the only roadway segment that would experience an increase of more than 5.0 dBA  $L_{dn}$  over existing conditions includes the segment of 1<sup>st</sup> Avenue west of B Street. As previously described, a 5-dBA change is required before any noticeable change in community response is expected. Based on this fact, a significant increase in traffic noise is considered to be an increase in the existing ambient noise environment of at least 5 dBA  $L_{dn}$ . As reflected in Table 4.11-11, this analysis included a large sample of local roadway segments, but did not include all roadways within San Mateo. These segments were selected for analysis purposes to illustrate potential changes in roadway noise throughout the EIR Study Area. Therefore, additional roadways segments in the EIR Study Area may experience increased traffic noise.

**TABLE 4.11-11 FUTURE (GENERAL PLAN BUILDOUT) ROADWAY NOISE LEVELS**

Roadway Segment	L <sub>dn</sub> at 50 Feet		Difference	Significant Increase?	Distance to L <sub>dn</sub> Contour – General Plan Buildout (feet)			
	Existing	Existing Plus Project			70 dBA	65 dBA	60 dBA	55 dBA
<b>US Highway 101 <sup>a</sup></b>								
All of San Mateo	80.3	80.9	0.6	No	619 ft	1,959 ft	6,194 ft	19,588 ft
<b>Interstate 280</b>								
All of San Mateo	84.7	84.7	N/A <sup>b</sup>	No	1,470 ft	4,648 ft	14,699 ft	46,481 ft
<b>State Route 92</b>								
Between City Limits & Mariner’s Island Boulevard	80.4	81.6	1.2	No	724 ft	2,289 ft	7,238 ft	22,888 ft
Between Mariner’s Island Boulevard & US Highway 101 Junction	84.7	85.4	0.7	No	1,740 ft	5,503 ft	17,403 ft	55,034 ft
Between US Highway 101 & El Camino Real	81.1	81.8	0.7	No	759 ft	2,401 ft	7,593 ft	24,011 ft
Between El Camino Real & Alameda de las Pulgas	79.2	80.8	1.6	No	532 ft	1,681 ft	5,317 ft	16,815 ft
Between Alameda de las Pulgas & Hillsdale Boulevard	78.4	79.7	1.3	No	466 ft	1,473 ft	4,657 ft	14,725 ft
Between Hillsdale Boulevard & City Limits	77.9	79.2	1.3	No	415 ft	1,312 ft	4,150 ft	13,125 ft
<b>1<sup>st</sup> Avenue</b>								
East of B Street	57.2	61.2	4.0	No	-	-	66 ft	207 ft
West of B Street	55.4	61.2	5.8	Yes	-	-	66 ft	208 ft

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**TABLE 4.11-11 FUTURE (GENERAL PLAN BUILDOUT) ROADWAY NOISE LEVELS**

Roadway Segment	L <sub>dn</sub> at 50 Feet		Difference	Significant Increase?	Distance to L <sub>dn</sub> Contour – General Plan Buildout (feet)			
	Existing	Existing Plus Project			70 dBA	65 dBA	60 dBA	55 dBA
2 <sup>nd</sup> Avenue								
East of B Street	58.1	61.2	3.1	No	-	-	66 ft	209 ft
Between B Street & Ellsworth Avenue	58.3	60.0	1.7	No	-	-	50 ft	157 ft
Between Ellsworth Avenue & San Mateo Drive	59.6	60.6	1.0	No	-	-	57 ft	180 ft
Between San Mateo Drive & El Camino Real	61.5	62.1	0.6	No	-	-	81 ft	256 ft
3 <sup>rd</sup> Avenue								
East of Humboldt Street	65.4	65.8	0.4	No	-	60 ft	191 ft	603 ft
Between Humboldt Street & Delaware Street	62.2	62.8	0.6	No	-	-	95 ft	300 ft
Between Delaware Street & B Street	60.4	62.9	2.5	No	-	-	98 ft	309 ft
Between B Street & Ellsworth Avenue	59.3	61.7	2.4	No	-	-	74 ft	235 ft
Between Ellsworth Avenue & San Mateo Drive	59.6	62.0	2.4	No	-	-	79 ft	249 ft
Between San Mateo Drive & El Camino Real	59.9	62.0	2.1	No	-	-	80 ft	252 ft
4 <sup>th</sup> Avenue								
East of Humboldt Street	65.8	66.1	0.3	No	-	64 ft	203 ft	641 ft
Between Humboldt Street & Delaware Street	63.6	63.7	0.1	No	-	37 ft	117 ft	369 ft
Between Delaware Street & B Street	61.3	63.3	2.0	No	-	34 ft	107 ft	337 ft
Between B Street & San Mateo Drive	60.8	63.7	2.9	No	-	37 ft	116 ft	367 ft
Between San Mateo Drive & El Camino Real	60.4	64.1	3.7	No	-	41 ft	128 ft	406 ft
5 <sup>th</sup> Avenue								
East of Delaware Street	58.9	62.8	3.9	No	-	-	94 ft	298 ft
Between Delaware Street & B Street	60.7	62.5	1.8	No	-	-	89 ft	282 ft
Between B Street & San Mateo Drive	61.1	63.1	2.0	No	-	32 ft	102 ft	322 ft
Between San Mateo Drive & El Camino Real	61.2	62.1	0.9	No	-	-	81 ft	256 ft
9 <sup>th</sup> Avenue								
East of Delaware Street	59.4	62.3	2.9	No	-	-	85 ft	270 ft
Between Delaware Street & B Street	61.7	62.7	1.0	No	-	-	94 ft	296 ft
Between B Street and El Camino Real	60.3	61.8	1.5	No	-	-	76 ft	239 ft

## NOISE

**TABLE 4.11-11 FUTURE (GENERAL PLAN BUILDOUT) ROADWAY NOISE LEVELS**

Roadway Segment	L <sub>dn</sub> at 50 Feet		Difference	Significant Increase?	Distance to L <sub>dn</sub> Contour – General Plan Buildout (feet)			
	Existing	Existing Plus Project			70 dBA	65 dBA	60 dBA	55 dBA
31 <sup>st</sup> Avenue								
Between Delaware Street & El Camino Real	59.2	61.8	2.6	No	-	-	76 ft	239 ft
West of El Camino Real	62.0	62.8	0.8	No	-	-	95 ft	299 ft
42 <sup>nd</sup> Avenue								
West of El Camino Real	59.4	61.5	2.1	No	-	-	71 ft	226 ft
Alameda de las Pulgas								
Between Crystal Springs Road & 20 <sup>th</sup> Avenue	67.2	68.0	0.8	No	-	100 ft	316 ft	1,000 ft
Between 20 <sup>th</sup> Avenue & Hillsdale Boulevard	65.1	66.5	1.4	No	-	71 ft	225 ft	712 ft
Concar Drive								
East of Grant Street	62.0	64.0	2.0	No	-	40 ft	127 ft	402 ft
Between Grant Street & Delaware Street	64.3	65.3	1.0	No	-	54 ft	171 ft	540 ft
Between Delaware Street & State Route 92 Ramps	65.9	66.1	0.2	No	-	64 ft	201 ft	637 ft
West of State Route 92 Ramps	57.2	61.0	3.8	No	-	-	63 ft	199 ft
Crystal Springs Road								
West of El Camino Real	60.4	63.4	3.0	No	-	34 ft	108 ft	343 ft
B Street								
North of 1 <sup>st</sup> Avenue	59.0	61.7	2.7	No	-	-	74 ft	234 ft
Between 1 <sup>st</sup> Avenue & 2 <sup>nd</sup> Avenue	58.8	62.1	3.3	No	-	-	82 ft	258 ft
Between 2 <sup>nd</sup> Avenue & 3 <sup>rd</sup> Avenue	58.8	61.5	2.7	No	-	-	70 ft	223 ft
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	58.6	61.0	2.4	No	-	-	63 ft	200 ft
Between 4 <sup>th</sup> Avenue & 5 <sup>th</sup> Avenue	57.8	60.6	2.8	No	-	-	58 ft	182 ft
Between 5 <sup>th</sup> Avenue & 9 <sup>th</sup> Avenue	58.9	62.2	3.3	No			83 ft	261 ft
South of 9 <sup>th</sup> Avenue	59.7	62.9	3.2	No			97 ft	305 ft
Baldwin Avenue								
East of El Camino Real	59.7	63.0	3.3	No	-	-	99 ft	313 ft
West of El Camino Real	58.4	58.6	0.2	No	-	-	36 ft	114 ft
Delaware Street								
Between Peninsula Avenue & Poplar Avenue	61.7	63.2	1.5	No	-	33 ft	103 ft	327 ft
Between Poplar Avenue & 3 <sup>rd</sup> Avenue	62.0	62.7	0.7	No	-	-	94 ft	296 ft

**NOISE**

**TABLE 4.11-11 FUTURE (GENERAL PLAN BUILDOUT) ROADWAY NOISE LEVELS**

Roadway Segment	L <sub>dn</sub> at 50 Feet		Difference	Significant Increase?	Distance to L <sub>dn</sub> Contour – General Plan Buildout (feet)			
	Existing	Existing Plus Project			70 dBA	65 dBA	60 dBA	55 dBA
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	63.2	63.5	0.3	No	-	35 ft	111 ft	352 ft
Between 4 <sup>th</sup> Avenue & 5 <sup>th</sup> Avenue	62.3	62.9	0.6	No	-	-	97 ft	308 ft
Between 5 <sup>th</sup> Avenue & 9 <sup>th</sup> Avenue	61.4	61.9	0.5	No	-	-	77 ft	242 ft
Between 9 <sup>th</sup> Avenue & 16 <sup>th</sup> Avenue	61.7	62.0	0.3	No	-	-	79 ft	249 ft
Between 16 <sup>th</sup> Avenue & Concar Drive	65.7	66.4	0.7	No	-	70 ft	220 ft	697 ft
Between Concar Drive & 19 <sup>th</sup> Avenue	66.3	67.0	0.7	No	-	79 ft	249 ft	787 ft
Between 19 <sup>th</sup> Avenue & Saratoga Drive	66.1	66.7	0.6	No	-	74 ft	234 ft	739 ft
Between Saratoga Drive & 25 <sup>th</sup> Avenue	63.7	64.9	1.2	No	-	49 ft	155 ft	491 ft
Between 25 <sup>th</sup> Avenue & 28 <sup>th</sup> Avenue	62.0	63.4	1.4	No	-	-	110 ft	346 ft
Between 28 <sup>th</sup> Avenue & 31 <sup>st</sup> Avenue	59.8	62.6	2.8	No	-	-	91 ft	288 ft
South of 31 <sup>st</sup> Avenue	61.2	62.2	1.0	No	-	-	84 ft	265 ft
<b>El Camino Real</b>								
Between Peninsula Avenue & Poplar Avenue	69.2	70.7	1.5	No	58 ft	184 ft	582 ft	1,839 ft
Between Poplar Avenue & Tilton Avenue	69.8	70.5	0.7	No	57 ft	179 ft	566 ft	1,790 ft
Between Tilton Avenue & Crystal Springs Road	70.0	70.7	0.7	No	59 ft	186 ft	587 ft	1,858 ft
Between Crystal Springs Road & 2 <sup>nd</sup> Avenue	69.7	70.1	0.4	No	51 ft	161 ft	510 ft	1,613 ft
Between 2 <sup>nd</sup> Avenue & 3 <sup>rd</sup> Avenue	71.4	71.8	0.4	No	75 ft	237 ft	751 ft	2,374 ft
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	71.5	71.9	0.4	No	78 ft	246 ft	779 ft	2,463 ft
Between 4 <sup>th</sup> Avenue & Barneson Avenue	71.7	72.0	0.3	No	79 ft	251 ft	792 ft	2,506 ft
Between Barneson Avenue & 17 <sup>th</sup> Avenue	71.7	72.4	0.7	No	87 ft	276 ft	871 ft	2,756 ft
Between 17 <sup>th</sup> Avenue & 20 <sup>th</sup> Avenue	72.3	73.4	1.1	No	110 ft	349 ft	1,104 ft	3,492 ft
Between 20 <sup>th</sup> Avenue & 25 <sup>th</sup> Avenue	71.2	72.9	1.7	No	97 ft	305 ft	965 ft	3,052 ft
Between 25 <sup>th</sup> Avenue & 28 <sup>th</sup> Avenue	71.4	72.9	1.5	No	98 ft	309 ft	978 ft	3,093 ft



## NOISE

**TABLE 4.11-11 FUTURE (GENERAL PLAN BUILDOUT) ROADWAY NOISE LEVELS**

Roadway Segment	L <sub>dn</sub> at 50 Feet		Difference	Significant Increase?	Distance to L <sub>dn</sub> Contour – General Plan Buildout (feet)			
	Existing	Existing Plus Project			70 dBA	65 dBA	60 dBA	55 dBA
Between 28 <sup>th</sup> Avenue & 31 <sup>st</sup> Avenue	71.4	72.8	1.4	No	95 ft	299 ft	946 ft	2,990 ft
Between 31 <sup>st</sup> Avenue & Hillsdale Boulevard Ramps	68.5	69.4	0.9	No	-	138 ft	435 ft	1,377 ft
Between Hillsdale Boulevard Ramps & 41 <sup>st</sup> Avenue	68.2	68.9	0.7	No	-	122 ft	385 ft	1,218 ft
Between 41 <sup>st</sup> Avenue & 42 <sup>nd</sup> Avenue	70.3	70.9	0.6	No	62 ft	196 ft	621 ft	1,963 ft
<b>Ellsworth Avenue</b>								
North of 2 <sup>nd</sup> Avenue	59.7	62.8	3.1	No	-	-	95 ft	300 ft
Between 2 <sup>nd</sup> Avenue & 3 <sup>rd</sup> Avenue	58.4	61.9	3.5	No	-	-	77 ft	244 ft
South of 3 <sup>rd</sup> Avenue	57.5	61.1	3.6	No	-	-	64 ft	204 ft
<b>Fashion Island Boulevard/Bridgepointe Parkway</b>								
Between Chess Drive & Baker Way	62.6	63.6	1.0	No	-	-	114 ft	361 ft
Between Baker Way & Mariner's Island Boulevard	65.5	67.3	1.8	No	-	85 ft	269 ft	850 ft
Between Mariner's Island Boulevard & Norfolk Street	65.1	66.7	1.6	No	-	74 ft	236 ft	745 ft
Between Norfolk Street & US Highway 101 Ramps	65.3	65.9	0.6	No	-	62 ft	197 ft	622 ft
<b>Franklin Parkway</b>								
Between Saratoga Drive & Delaware Street	60.5	64.7	4.2	No	-	-	148 ft	468 ft
<b>Hillsdale Boulevard</b>								
East of Norfolk Street	71.8	72.7	0.9	No	93 ft	295 ft	932 ft	2,949 ft
Between Norfolk Street & US Highway 101 Ramps	69.8	70.3	0.5	No	-	170 ft	538 ft	1,703 ft
Between US Highway 101 Ramps & Saratoga Drive	70.6	71.3	0.7	No	67 ft	211 ft	668 ft	2,111
Between Saratoga Drive & El Camino Real	68.4	68.6	0.2	No	-	114 ft	359 ft	1,137 ft
Between El Camino Real & Alameda de las Pulgas	64.2	65.0	0.8	No	-	50 ft	157 ft	498 ft
Between Alameda de las Pulgas & Campus Drive	62.1	63.5	1.4	No	-	35 ft	112 ft	354 ft
<b>Humboldt Street</b>								
Between Peninsula Avenue & Poplar Avenue	61.9	63.1	1.2	No	-	33 ft	103 ft	326 ft
Between Poplar Avenue & 3 <sup>rd</sup> Avenue	61.8	63.2	1.4	No	-	33 ft	103 ft	327 ft

NOISE

**TABLE 4.11-11 FUTURE (GENERAL PLAN BUILDOUT) ROADWAY NOISE LEVELS**

Roadway Segment	L <sub>dn</sub> at 50 Feet		Difference	Significant Increase?	Distance to L <sub>dn</sub> Contour – General Plan Buildout (feet)			
	Existing	Existing Plus Project			70 dBA	65 dBA	60 dBA	55 dBA
Between 3 <sup>rd</sup> Avenue & 4 <sup>th</sup> Avenue	60.9	61.5	0.6	No	-	-	71 ft	223 ft
South of 4 <sup>th</sup> Avenue	60.0	61.6	0.6	No	-	-	72 ft	227 ft
<b>Mariner's Island Boulevard</b>								
Between 3 <sup>rd</sup> Avenue & Fashion Island Boulevard	62.6	64.7	2.1	No	-	-	147 ft	464 ft
South of Fashion Island Boulevard	65.7	66.0	0.3	No	-	63 ft	201 ft	634 ft
<b>Norfolk Street</b>								
North of 3 <sup>rd</sup> Avenue	61.5	63.0	1.5	No	-	-	99 ft	313 ft
Between 3 <sup>rd</sup> Avenue & Kehoe Avenue	62.9	64.2	1.3	No	-	42 ft	132 ft	417 ft
Between Kehoe Avenue & Fashion Island Boulevard	62.8	64.2	1.4	No	-	42 ft	131 ft	416 ft
Between Fashion Island Boulevard & El Camino Real	62.8	63.7	0.9	No	-	-	117 ft	371 ft
<b>Peninsula Avenue</b>								
Between Bayshore Boulevard & Humboldt Street	67.5	68.2	0.7	No	-	104 ft	330 ft	1,042 ft
Between Humboldt Street & Delaware Street	64.8	65.3	0.5	No	-	53 ft	169 ft	535 ft
Between Delaware Street & San Mateo Drive	64.2	64.4	0.2	No	-	44 ft	139 ft	439 ft
Between San Mateo Drive & El Camino Real	60.3	61.1	0.8	No	-	-	65 ft	205 ft
<b>Poplar Avenue</b>								
Between US Highway 101 & Humboldt Street	61.7	61.7	0.0	No	-	-	75 ft	236 ft
Between Humboldt Street & Delaware Street	60.6	60.7	0.1	No	-	-	59 ft	187 ft
Between Delaware Street & San Mateo Drive	59.5	60.5	1.0	No	-	-	56 ft	178 ft
Between San Mateo Drive & El Camino Real	60.1	62.6	2.5	No	-	-	91 ft	287 ft
<b>San Mateo Drive</b>								
Between Peninsula Avenue & Poplar Avenue	64.9	65.0	0.1	No	-	50 ft	157 ft	497 ft
Between Poplar Avenue & 2 <sup>nd</sup> Avenue	62.9	63.6	0.7	No	-	36 ft	114 ft	360 ft
Between 2 <sup>nd</sup> Avenue & 3 <sup>rd</sup> Avenue	59.9	62.4	2.5	No	-	-	86 ft	273 ft

## NOISE

**TABLE 4.11-11 FUTURE (GENERAL PLAN BUILDOUT) ROADWAY NOISE LEVELS**

Roadway Segment	L <sub>dn</sub> at 50 Feet		Difference	Significant Increase?	Distance to L <sub>dn</sub> Contour – General Plan Buildout (feet)			
	Existing	Existing Plus Project			70 dBA	65 dBA	60 dBA	55 dBA
Between 3 <sup>rd</sup> Avenue 4 <sup>th</sup> Avenue	59.4	62.0	2.6	No	-	-	80 ft	253 ft
Between 4 <sup>th</sup> Avenue & 5 <sup>th</sup> Avenue	58.3	59.8	1.5	No	-	-	48 ft	151 ft
<b>Saratoga Drive</b>								
Between Delaware Street & Franklin Parkway	64.1	66.1	2.0	No	-	65 ft	205 ft	649 ft
Between Franklin Parkway & Hillsdale Boulevard	63.9	65.7	1.8	No	-	58 ft	184 ft	583 ft
Between Hillsdale Boulevard & Santa Clara Way	60.6	60.9	0.3	No	-	-	62 ft	196 ft
<b>Tilton Avenue</b>								
East of El Camino Real	59.3	61.2	1.9	No	-	-	66 ft	209 ft

Notes: **shading** = significant increase

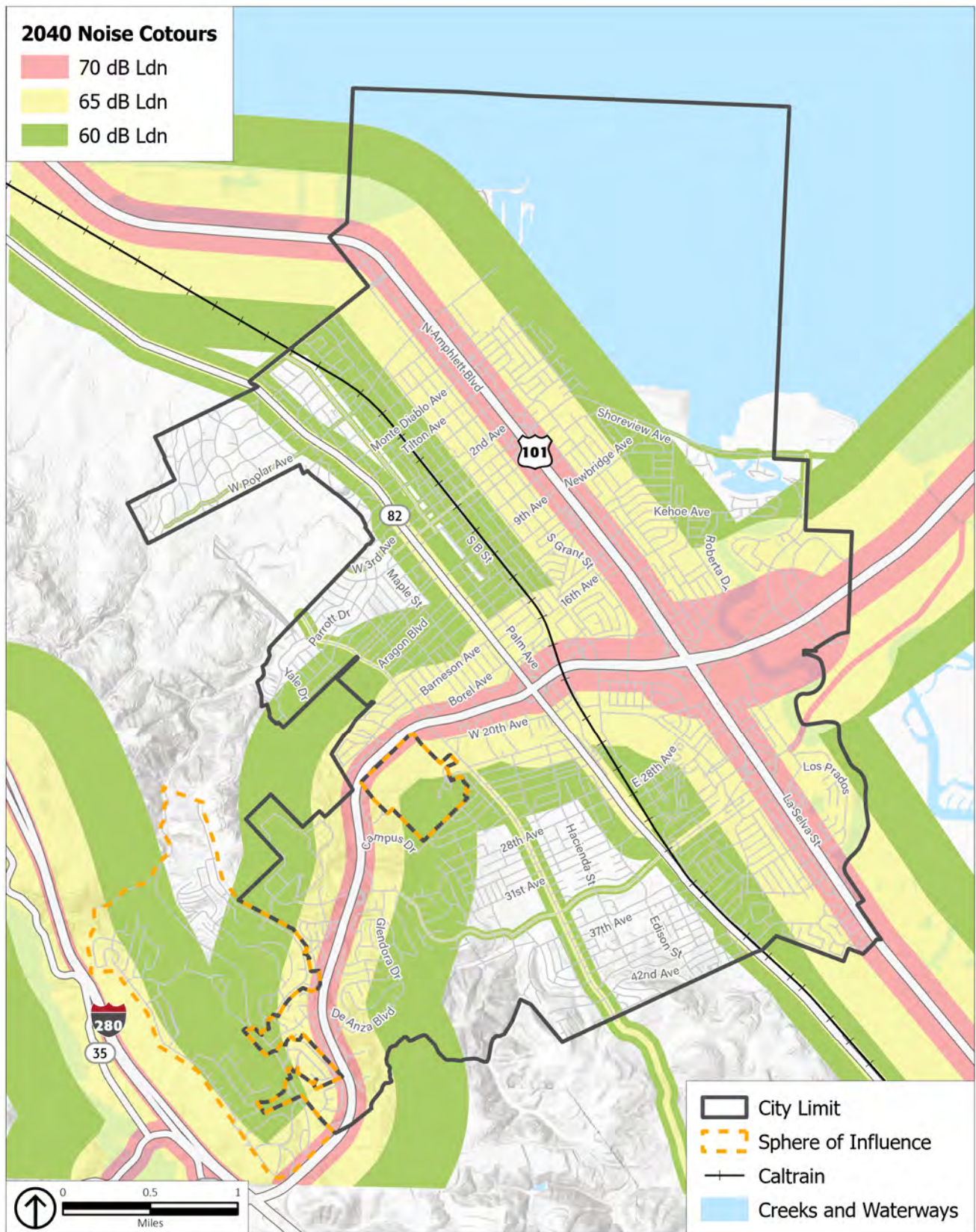
a. Modeled noise calculations adjusted to account for 10-foot-high sound walls adjacent to US Highway 101 as it traverses San Mateo.

b. The nearest segment of Interstate 280 to San Mateo traverses to the west of San Mateo, outside of the EIR Study Area. No Existing + Project traffic is available for Interstate 280.

Source: Traffic noise levels were calculated using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by Kittelson and Associates. Refer to Appendix D2 for traffic noise modeling assumptions and results.

All future projects subject to discretionary review under the proposed project would be required to be evaluated for noise/land use compatibility, including traffic noise/land use compatibility. Proposed General Plan Policy N 1.1 would require the integration of noise considerations into land use planning decisions to minimize new traffic noise impacts to or from new development. Proposed Policy N 1.2 would require the submittal of an acoustical analysis and interior noise insulation for all “noise sensitive” land uses that are determined to likely have an exterior noise level of 60 dBA L<sub>dn</sub> or above, as shown on Figure N-2 of the General Plan (Figure 4.11-5 of this chapter). Similarly, proposed Policy N 1.3 would require the submittal of an acoustical analysis for all new multifamily common open space that have an exterior noise level of 60 dBA L<sub>dn</sub> or above, as shown on Figure N-2 of the General Plan (Figure 4.11-5 of this chapter). The acoustical analyses at the project level would include refined evaluation of noise/land use compatibility in order to more precisely identify the existing ambient noise environment affecting the subject site, typically achieved through the conducting of baseline noise measurements with a sound level meter and/or calculating traffic noise from surrounding roadway facilities with regulatory traffic noise models. The location-specific baseline noise measurements and/or traffic noise calculations presented in the acoustical analyses either demonstrate the noise/land use compatibility between a proposed land use and location or assist with the characterization of the ambient noise environment in a manner that allows for implementation of the appropriate noise attenuation measures necessary to protect the new noise-sensitive land use.

NOISE



Source: ECORP, 2023; PlaceWorks, 2023.

Figure 4.11-5  
Future Traffic Noise Contours

## NOISE

The Noise (N) Element of the proposed General Plan also includes Policy N 2.4, which promotes reduced traffic noise along highways and high-volume roadway where noise-sensitive land uses are adversely impacted by excessive traffic noise levels as follows:

- **Goal N-2:** Minimize unnecessary, annoying, or unhealthful noise.
  - **Policy N 2.4: Traffic Noise.** Recognize projected increases in ambient noise levels resulting from future traffic increases, as shown on Figure N-2. Promote reduced traffic speeds and the installation of noise barriers or other methods to reduce traffic noise along highways and high-volume roadways where noise-sensitive land uses (listed in Table N-1) [of the proposed General Plan] are adversely impacted by excessive noise levels (60 dBA [Ldn] or above).

Nonetheless, the 1<sup>st</sup> Avenue roadway segment west of B Street would experience an increase of more than 5.0 dBA L<sub>dn</sub> over existing conditions with buildout anticipated under the proposed project, and traffic noise under the proposed project would therefore be a *significant* impact.

**Impact NOISE-1:** Buildout under the proposed project is anticipated to result in unacceptable traffic noise with an increase of more than 5.0 dBA L<sub>dn</sub> over existing conditions along one roadway segment (1<sup>st</sup> Avenue west of B Street) within the EIR Study Area.

**Mitigation Measure:** None available.

**Significance with Mitigation:** Significant and Unavoidable. Lead agencies have limited remedies at their disposal to effectively reduce traffic-related noise. Addressing traffic noise at the receiver rather than the source usually takes the form of noise barriers (i.e., sound walls). While constructing noise barriers along streets would reduce noise, the placement of sound walls between existing residences/businesses and local roadways would not be desirable as it would conflict with the community's aesthetic, design, and character, and is therefore deemed infeasible. Furthermore, such barriers would likely require property owner approval, which cannot be ensured. While measures such as encouraging ridesharing, carpooling, and alternative modes of transportation could reduce vehicle volumes, and are promoted by the City and by the proposed project, such measures cannot be relied upon to demonstrate a reduction in vehicle trips to the extent needed to ensure reduced vehicle noise levels below established thresholds. Therefore, no feasible mitigation measures exist to reduce this impact, and the impact to the 1<sup>st</sup> Avenue roadway segment west of B Street is significant and unavoidable.

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NOISE-2	The proposed project would not result in the generation of excessive groundborne vibration or groundborne noise levels.
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## Construction Vibration

Future construction activities under the proposed project have the potential to expose sensitive land uses within San Mateo to groundborne vibration. Construction activities would occur in a variety of locations throughout the EIR Study Area, and may require the use of off-road equipment known to generate some degree of vibration. Construction activities that generate excessive vibration, such as

blasting, would not be expected to occur from future development due to the urbanized nature of San Mateo and small number of undeveloped properties, which reduces the likelihood of blasting during construction. Receptors sensitive to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and the sick), and equipment (e.g., magnetic resonance imaging equipment, high resolution lithographic, optical and electron microscopes). Regarding the potential effects of groundborne vibration to people, except for long-term occupational exposure, vibration levels rarely affect human health.

The majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout a construction site and at various distances from sensitive receptors. Since specific future projects under the proposed project are unknown at this time, it is conservatively assumed that the construction areas associated with these future projects could be located within 50 feet of sensitive land uses. The primary vibration-generating activities would occur during grading, placement of underground utilities, and construction of foundations. Table 4.11-12, *Representative Vibration Source Levels for Construction Equipment*, shows the typical vibration levels produced by construction equipment at 50 feet.

**TABLE 4.11-12 REPRESENTATIVE VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT**

Equipment	Peak Particle Velocity at 50 Feet (inches per second)	Vibration Level Vibration Velocity at 50 Feet (VdB)
Pile Driver (Impact)	0.225	95
Pile Driver (Sonic)	0.059	84
Vibratory Roller	0.073	85
Hoe Ram	0.031	78
Large Bulldozer	0.031	78
Caisson Drilling	0.031	78
Loaded Trucks	0.026	77
Jackhammer	0.012	70
Small Bulldozer	0.001	49

Source: California Department of Transportation, April 2020, *Transportation and Construction Vibration Guidance Manual*, <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>, accessed April 11, 2023. Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 11, 2023.

As identified in Table 4.11-2, the threshold at which there is a risk of architectural damage to historic and some old buildings is 0.25 PPV (in/sec). The threshold at which there is a risk of architectural damage to older residential structures is 0.3 PPV (in/sec). This is also the threshold at which vibrations may begin to feel severe to people in buildings. The threshold at which there is a risk of architectural damage to new residential structures and modern industrial/commercial buildings is 0.5 PPV (in/sec).

Proposed General Plan Policy N 2.7, discussed in impact discussion NOISE-1, would require construction noise limits and vibration monitoring around sensitive receptors, including through limiting construction hours and individual and cumulative noise from construction equipment. For larger development projects that demand intensive construction periods and/or use equipment that could create vibration



## NOISE

impacts, proposed Policy N 2.7 requires a vibration impact analysis, as well as monitoring and reporting of noise/vibration levels throughout construction, consistent with industry standards.

Proposed Policy N 2.7 provides a strong policy framework for minimizing potential groundborne vibration impacts from construction. The use of the identified thresholds specific to building types during the requirement of construction vibration monitoring would ensure no damage to nearby structures. In the case that construction vibration monitoring was to identify a construction activity surpassing a threshold, vibration-reduction measures could be implemented. Examples of such measures include, but are not limited to:

- Implementing “quiet” pile-driving technology (such as the use of a sonic pile driver instead of an impact pile driver, and/or pre-drilling of piles and using more than one pile driver to shorten the total pile driving duration).
- Use of cushion blocks to dampen impact noise, if feasible based on soil conditions. Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon and micarta (a composite material).
- Installing shrouds around the impact device.

Adherence to the vibration-reducing measures in the proposed Noise Element would ensure that vibration reduction is being provided to minimize the temporary impact that is construction. Construction vibration under the proposed project would be *less than significant*.

## Train Vibration

As discussed in impact discussion NOISE-1, the proposed project would not generate any new train trips through the EIR Study Area. Vibration levels as a result of trains traveling along the existing railroad and light rail corridors under the proposed project would remain the same as existing conditions, unless otherwise changed by the respective rail authority. However, development under the proposed project has the potential to locate new development along the Caltrain/UPRR rail line, where it would potentially be exposed to substantial levels of vibration.

Passing trains create vibration events that last approximately 2 minutes, though it is extremely rare for vibration from train operations to cause substantial or even minor cosmetic building damage.<sup>16</sup> Older, historic buildings often considered fragile are the predominate source of concern from rail-related vibration.<sup>17</sup> According to the Federal Transit Administration, groundborne vibration from “locomotive-powered passenger and freight rail” is readily perceptible at distances of less than 50 feet between the track and building foundations (0.08 PPV), while vibration from “rapid transit/light rail” is barely

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<sup>16</sup> Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 11, 2023.

<sup>17</sup> Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 11, 2023.

perceptible at that distance (0.01 PPV).<sup>18</sup> While each building has different characteristics relative to structure-borne vibration, in general, the heavier the building, the lower the levels of vibration. Additionally, community (human) response to vibration correlates with the frequency of events and, intuitively, more frequent events of low vibration levels may evoke the same response as fewer high vibration level events.

Table 4.11-13, *Representative Train Vibration Levels*, identifies train vibration levels at several distances within 200 feet, as determined by the Federal Transit Administration.<sup>19</sup>

**TABLE 4.11-13 REPRESENTATIVE TRAIN VIBRATION LEVELS**

Distance to Source (Feet)	Locomotive-Powered Trains		Rapid Transit/Light Rail	
	Peak Particle Velocity (inches per second)	Vibration Level Vibration Velocity (VdB)	Peak Particle Velocity (inches per second)	Vibration Level Vibration Velocity (VdB)
10	0.30	95	0.07	82
25	0.10	90	0.02	78
50	0.08	85	0.02	74
75	0.07	82	0.01 – 0.02	70
100	0.04	79	0.01 – 0.02	68
125	0.02	78	0.01 – 0.02	66
150	0.02	78	>0.01	64
175	0.01	73	>0.01	62
200	0.01	71	>0.01	60

Source: Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 11, 2023.

As shown in Table 4.11-13, a locomotive-powered train traversing at a distance of 10 feet from a receptor could be expected to result in 0.30 PPV (95 VdB) at the receptor, which is the threshold at which there is a risk of architectural damage to older residential structures. The construction of new buildings under the proposed project would be done in conformance with the most recent building standards, reducing the potential for damage to buildings from typical rail noise. In addition, the Noise (N) Element of the proposed General Plan addresses train vibration as follows:

- **Goal N-2:** Minimize unnecessary, annoying, or unhealthful noise.
  - **Policy N 2.6: Railroad Vibration.** Require that new residential projects (or other sensitive uses) within 200 feet of existing railroad lines conduct a ground-borne vibration and noise evaluation consistent with Federal Transit Administration-approved methodologies.

Adherence to proposed General Plan Policy N 2.6 would ensure that train-induced vibration under the proposed would be *less than significant*.

<sup>18</sup> Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 11, 2023.

<sup>19</sup> Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment*, [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf), accessed April 11, 2023.

## NOISE

**Significance without Mitigation:** Less than significant.

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NOISE-3	The proposed project would not expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip or an airport land use plan.
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The northeastern part of the EIR Study Area is somewhat affected by aircraft activity due to nearby San Francisco International Airport. Typically, aircraft are on approach (i.e., landing) over San Francisco Bay just to the east of San Mateo. However, the city is located outside of the Airport's 65 dBA CNEL noise contour, and the proposed project would not affect the frequency or flight paths of flights into the San Francisco International Airport. Therefore, people within the EIR Study Area would not be exposed to excessive noise levels and there would be *no impact*.

**Significance without Mitigation:** No Impact.

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NOISE-4	The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in cumulative traffic noise impacts in the area.
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## Cumulative Construction Noise and Vibration

Construction noise impacts primarily affect the areas immediately adjacent to the construction site. Development that could occur with implementation of the proposed project and cumulative development within nearby areas of San Mateo County be constructed contemporaneously and could result in construction noise levels higher than those of development of under the proposed project alone at some receptor locations. As discussed above, noise levels generated by individual pieces of construction equipment typically range from approximately 74 dBA to 101.3 dBA  $L_{max}$  at 50 feet and 67.7 dBA to 94.3 dBA  $L_{eq}$  at 50 feet. The City of San Mateo has established and enforces noise standards for construction activity for both daytime and nighttime hours. Further, the proposed General Plan Noise Element would regulate the construction noise of larger development projects that demand intensive construction periods by requiring construction noise monitoring and reporting of noise levels throughout construction. A monitoring plan would be required to be prepared to include information on the monitoring locations, durations and regularity, the instrumentation to be used, and appropriate noise-control measures to ensure compliance with the noise ordinance. Therefore, while the potential exists for construction projects under the proposed project and other foreseeable development to occur simultaneously and in proximity to one another, construction equipment operations would operate within the constraints of SMMC.

The potential for a cumulative vibration-related damage impact is minimal as vibration impacts are based on instantaneous PPV levels. Thus, worst-case groundborne vibration levels from construction are determined by whichever individual piece of equipment generates the highest vibration levels. Unlike the analysis for average noise levels, in which noise levels of multiple pieces of equipment can be combined to generate a maximum combined noise level, instantaneous peak vibration levels do not

combine in this manner. Vibration from multiple construction sites, even if they are located close to one another, would not combine to raise the maximum PPV. Therefore, vibration impacts resulting from construction of future development under the proposed project would not combine with vibration effects from cumulative projects in the vicinity and the impact would be *less than significant*.

## Cumulative Stationary Source Noise

Long-term stationary noise sources associated with the development and activities under the proposed project, combined with other cumulative projects, could cause local noise level increases. Noise levels associated with the proposed project and cumulative development combined could result in higher noise levels than considered separately. However, as described above, SMMC Chapter 7.30 establishes regulations to protect the inhabitants of the city against all forms of nuisances, including stationary source noise, as shown in Table 4.11-4. With adherence to SMMC Chapter 7.30, future development under the proposed project and cumulative development combined would not create cumulatively considerable stationary noise sources and the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## Cumulative Traffic Noise

The discussion of cumulative operational noise impacts assesses whether future development under the proposed project, in conjunction with overall citywide growth and other cumulative projects, would significantly affect the roadway noise and, if so, whether the proposed project's contribution to the cumulative impact would be considerable. The analysis contained in impact discussion NOISE-1 above is largely a cumulative analysis in that the transportation modeling also includes the citywide and regional changes in housing units and employment that would occur through the General Plan horizon of 2040. As identified in Impact NOISE-1, the proposed project would result in a significant traffic noise impact to the segment of 1<sup>st</sup> Avenue west of B Street; therefore, the proposed project would result in a cumulatively considerable and *significant* noise impact associated with cumulative traffic noise.

**Impact NOISE-6:** Buildout under the proposed project is anticipated to result in unacceptable cumulative traffic noise within the EIR Study Area.

**Mitigation Measures:** None available.

**Significance with Mitigation:** Significant and unavoidable. As discussed in impact discussion NOISE-1, there are no feasible mitigation measures to reduce this impact.

## NOISE

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## 4.12 PARKS AND RECREATION

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential parks and recreation impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.12.1 ENVIRONMENTAL SETTING

#### 4.12.1.1 REGULATORY FRAMEWORK

##### State Regulations

The 1975 Quimby Act (California Government Code Section 66477) authorizes cities and counties to adopt ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for operation and maintenance of park facilities. A 1982 amendment (Assembly Bill [AB] 1600) requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project upon which the fee is imposed. Cities with a high ratio of park space to inhabitants can set a standard of up to 5 acres per 1,000 persons for new development. Cities with a lower ratio can only require the provision of up to 3 acres of park space per 1,000 persons.<sup>1</sup> The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of City-owned parkland.

##### Regional Regulations

In 1969, the McAteer-Petris Act designated the Bay Conservation and Development Commission (BCDC) as the agency responsible for the protection of the San Francisco Bay and its natural resources. BCDC fulfills this mission through the implementation of the *San Francisco Bay Plan* (Bay Plan), an enforceable plan that guides the future protection and use of San Francisco Bay and its shoreline.<sup>2</sup> The Bay Plan includes a range of policies on public access, water quality, project design, and dredging and fill. The Bay Plan also designates shoreline areas that should be reserved for water-related sports, industry, and public recreation; airports; and wildlife areas. Note that the City of San Mateo is within BCDC's jurisdiction. Impacts related to aesthetics, biological resources, water quality, and land use and planning are discussed in Chapter 4.1, *Aesthetics*, Chapter 4.3, *Biological Resources*, Chapter 4.9, *Hydrology and Water Quality*, and Chapter 4.10, *Land Use and Planning*, of this Draft EIR.

<sup>1</sup> California Legislative Information, 2015, Assembly Bill No. 1191, Chapter 276, [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=201520160AB1191](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1191), accessed July 29, 2022.

<sup>2</sup> San Francisco Bay Conservation and Development Commission, May 5, 2020, *San Francisco Bay Plan*, <https://bcdca.gov/pdf/bayplan/bayplan.pdf>, accessed August 9, 2022.



## PARKS AND RECREATION

### Local Regulations

#### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to parks and recreation are primarily in the Conservation, Open Space, Parks and Recreation Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.12.3, *Impact Discussion*.

#### *City of San Mateo Municipal Code*

The San Mateo Municipal Code (SMMC) includes various directives pertaining to parks and recreation. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to parks and recreation impacts are included in Title 13, *Parks and Recreation*, and Title 26, *Subdivisions*.

- Section 13.05.070, *Park Impact Fee*, establishes a park impact fee for residential units. The park impact fee is to be based on the value of real property in the City of San Mateo and is calculated in the same manner as the land dedication or in-lieu park fee.
- Section 13.05.080, *Park Master Plans*, lays the procedural framework for the Community Development Department to review master plans of park properties and facilities.
- Chapter 26.64, *Dedication of Land for Community Purposes*, establishes standards for the dedication of land or payment of a fee in lieu thereof or a combination of both, at the option of the City, for park and recreation facilities. Two acres are needed for each 1,000 people. The in-lieu fee is determined by the Parks and Recreation Director and is calculated using the fair market value of land in the city.

#### *Recreation Facilities Strategic Plan*

The Recreation Facilities Strategic Plan (RFSP) of 2016 establishes a vision for the future of San Mateo's Recreation Facility Centers. In the RFSP, recreation facilities include structures, recreation centers, community buildings and pools intended to serve recreational and social interests.

The RFSP summarizes multiple studies and plans to create 18 strategic directions for the San Mateo City Parks and Recreation Department. Some of the strategic directions included developing a new District Center at the current site of Joinville Pool, remodeling King Center, and installing a new community building at Central Center and Central Studios. Other overarching plans and design principles include designing for maximum interior flexibility and ensuring that the spaces created are adequate to meet the needs/interests and be consistent with the size and layout standards needed for the activity.

## PARKS AND RECREATION

### *Central Park Master Plan*

The Central Park Master Plan, adopted in May 2017, retains the historic character of Central Park, while proposing new additions to improve community gathering and recreation spaces.<sup>3</sup> The Plan calls for additional facilities, as well as renovations of current park amenities. When fully implemented, Central Park is anticipated to have better visual and pedestrian connection to downtown, increased space for flexible community use and events, and a greater emphasis on the park's role as the city's gathering place for residents.

### *Laurelwood Park and Sugarloaf Mountain Open Space Management Plan Amendment*

Adopted in 2015, this amendment proposes two revisions to the Laurelwood Park and Sugarloaf Mountain Management Plan that was adopted in 2007. The two revisions to the 2007 plan are to replace the trail routing component of the existing Management Plan, and to realign Habitat Compartmentalization Zones to coordinate them with the trails and the access they provide. Besides these adjustments, all other programs in the Laurelwood Park and Sugarloaf Mountain Management Plan remain unchanged.

### *Shoreline Parks Specific Plan*

The *Shoreline Park Specific Plan* was adopted in May 1971 and was last revised in July 1990.<sup>4</sup> The plan focuses on the Shoreland, Seal Point, Seal Cove, Marina Lagoon and San Mateo Creek areas and aims to establish as much open space as possible, provide as much public access as possible to the shoreline, cluster compatible recreational facilities, and develop areas for multi-purpose use.

## 4.12.1.2 EXISTING CONDITIONS

### Parks

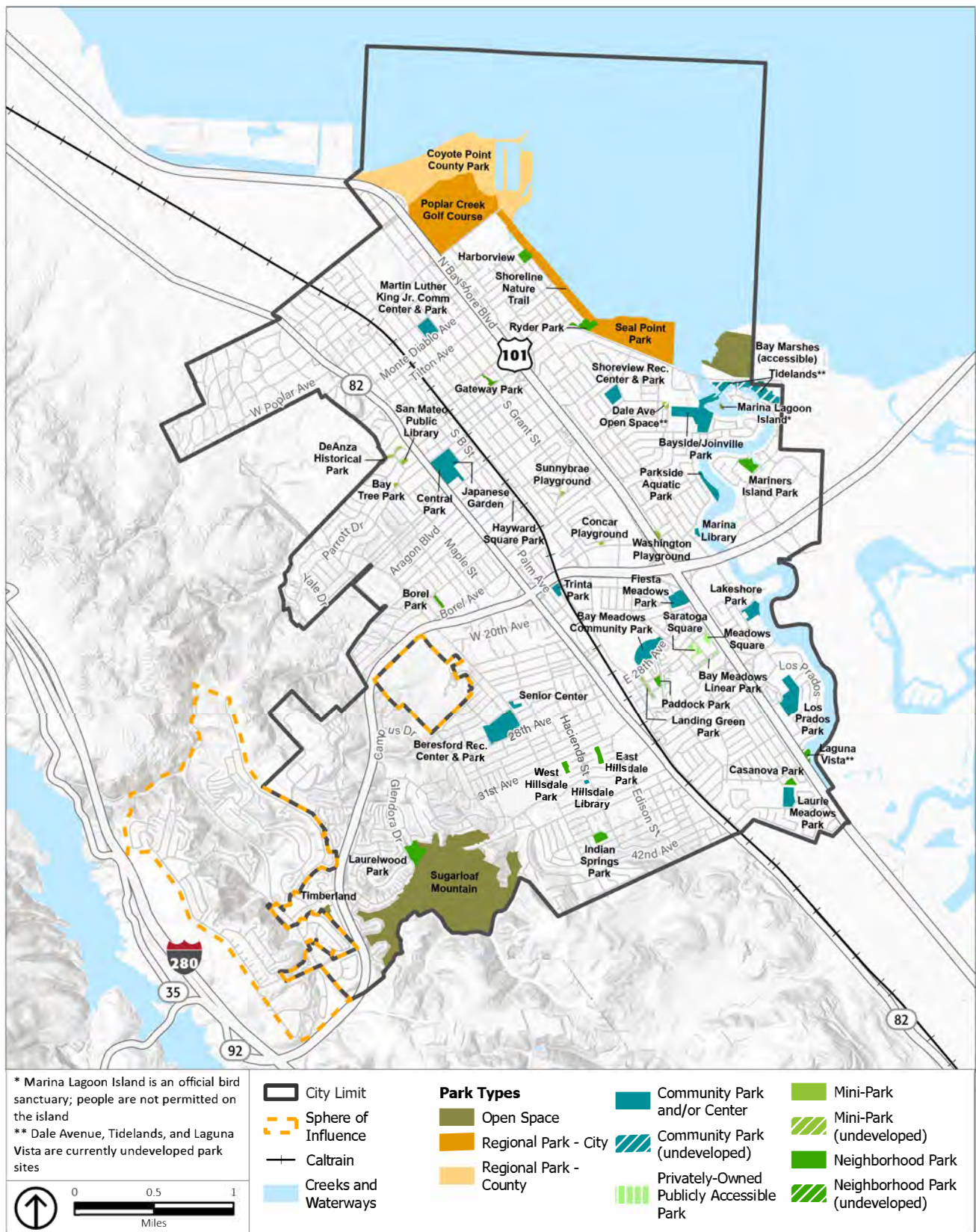
The City of San Mateo has a variety of parks, including sixteen neighborhood parks, eleven larger community parks, six recreation/community centers, the Shoreline and Sugarloaf regional park system, and several small "mini" parks.<sup>5</sup> Figure 4.12-1, *Public Parks and Recreation Sites*, shows the location of the parks within San Mateo.

<sup>3</sup> City of San Mateo, May 2017, *Central Park Master Plan Update*, [https://www.cityofsanmateo.org/DocumentCenter/View/61324/CPMPU\\_FINAL-May-26-17\\_17\\_10\\_16v1?bidId=](https://www.cityofsanmateo.org/DocumentCenter/View/61324/CPMPU_FINAL-May-26-17_17_10_16v1?bidId=), accessed July 29, 2022.

<sup>4</sup> City of San Mateo, 1990, *Shoreline Park Specific Plan*, [cityofsanmateo.org/DocumentCenter/View/2486/Shoreline-Park-Specific-Plan?bidId=](https://www.cityofsanmateo.org/DocumentCenter/View/2486/Shoreline-Park-Specific-Plan?bidId=), accessed August 19, 2022.

<sup>5</sup> City of San Mateo, 2021, *Parks and Facilities*, <https://www.cityofsanmateo.org/559/Parks-and-Facilities>, accessed July 27, 2022.

## PARKS AND RECREATION



Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 4.12-1  
Public Parks and Recreation Sites

## PARKS AND RECREATION

As shown in Table 4.12-1, *Parks and Open Space in San Mateo*, there are approximately 794 acres of parks and open space in San Mateo. Using the proposed project's existing baseline conditions of 108,020 residents, the existing total park and open space ratio is 7.35 acres of parks per 1,000 residents.<sup>6</sup>

**Table 4.12-1 Parks and Open Space in San Mateo**

Park	Description	Acres
<b>Open Space</b>		
Bay Marshes Tidelands	Bay Marsh Tidelands is an estuary wetland on the San Francisco Bay. It has an elevated boardwalk over the area with informational signage explaining the delicate nature of wetlands and identifying some of the unique inhabitants of the area.	54.5
Marina Lagoon Island	This is an unofficial bird sanctuary and people are not allowed on the island. Water activities around the island are permitted.	
Sugarloaf Mountain	This large open space parkland has many nature trails providing a variety of hiking opportunities.	218.3
Timberland	Timberland Open Space is inaccessible open space with native trees and a wet weather creek sandwiched between 2 groups of houses.	1.8
<b>Subtotal – Open Space</b>		<b>274.6</b>
<b>Regional Park - County</b>		
Coyote Point County Park	Coyote Point County Park has many trails, drop in picnic areas, a playground, as well as group picnic areas and RV camps.	155.2
<b>Subtotal – Regional County Parks</b>		<b>155.2</b>
<b>Regional Parks - City</b>		
Bayfront Nature Area/Shoreline Nature Trail	This trail is in a working marsh environment. The trail is paved, open to bicycling and hiking and is 0.5 miles in length.	33.8
Poplar Creek Golf Course	This is an 18-hole golf course that is run through the city.	105
Ryder Park	Ryder Park, which is within the Shoreline Parks along the San Francisco Bay, includes picnic facilities, an outdoor classroom, a boardwalk through marshland, and interpretive panels on native history.	4.1
Seal Point Park	Seal Point Park, also located along the San Francisco Bay, includes walking and biking pathways, a 3-acre dog park, and a boardwalk through marshland	60.3
<b>Subtotal – Regional City Parks</b>		<b>203.2</b>
<b>Community Parks and Centers</b>		
Bay Meadows Community Park	Bay Meadows Park includes a soccer field, picnic and restroom facilities, a lawn area, and a walking path that rings the park.	12
Bayside/Joinville Park	Bayside/Joinville Park, within walking distance of Seal Point Park, includes a playground, ball fields, tennis courts, picnic areas, and the Joinville Swim Center.	20.5
Beresford Recreation Center & Park	Beresford Park and Community Center includes a variety of recreation opportunities including a playground, tennis courts, a baseball diamond, skate area, bocce ball area, and basketball court. The park also houses the city's sole community garden plots.	18.5

<sup>6</sup> 108,020 San Mateo residents / 1,000 residents = 108.02; 794 acres / 108.2 = 7.35 acres per 1,000 residents

## PARKS AND RECREATION

**Table 4.12-1 Parks and Open Space in San Mateo**

<b>Park</b>	<b>Description</b>	<b>Acres</b>
Central Park & Center	Central Park, the 16.3-acre former Kohl Mansion property in the downtown, includes a Japanese Garden, rose garden, mini train, picnic facilities, playground, restrooms, tennis courts, baseball field, restrooms, and community center.	15.3
Japanese Garden	The Japanese Garden was designed by landscape architect, Nagao Sakurai of the Imperial Palace of Tokyo, and features a granite pagoda, tea house, koi pond and a bamboo grove.	1
Lakeshore Park	Lakeshore Park includes a playground, basketball court, baseball diamond, picnic areas, and restrooms.	4.2
Los Prados Park	This park includes lighted tennis and basketball courts, a playground, baseball diamond, soccer/multipurpose field, picnic areas, and restrooms.	12.6
Martin Luther King Jr. Community Center and Park	Martin Luther King Park includes a baseball field, soccer field, basketball court, picnic areas, playground, community center, and swimming pool.	6.1
Parkside Aquatic Park	This park is bordered by the Marina Lagoon and is the site of the City's only boating launch ramp. Parkside Aquatic has the following amenities: bathroom facilities, roped-off swim area, beach and park area, playground apparatus and boat launch.	3.4
Shoreview Recreation Center & Park	This park offers a playground, tennis courts, a basketball court, a baseball field and a skate board plaza. It has one sheltered picnic area.	4.8
Tidelands	Tidelands Open Space is an undeveloped estuary associated with the lagoon and has been preserved for wetland habitat. The Bay Trail bike path runs through and along the site.	10.9
<b>Subtotal – Community Parks and Centers</b>		<b>109.3</b>
<b>Neighborhood Parks</b>		
Borel Park	This park offers two children's play areas, ADA compliant pathways, three shade structures, seating areas including picnic tables, two passive lawns, and new landscaping, irrigation and drainage.	1.6
Casanova Park	This neighborhood park is connected to Laurie Meadows by a pedestrian/ bicycle bridge over Laurel Creek that splits the two parks. It contains a small children's play area, restroom, basketball hoop, and a picnic area with shade.	1.4
East Hillsdale Park	This neighborhood park includes a playground and tennis courts.	2.1
Fiesta Meadows Park	This park has a soccer field and an asphalt pathway around the perimeter of that soccer field allowing for walking and jogging.	4.7
Gateway Park	Located along the San Mateo Creek, this park has grassy lawns, a few benches and picnic tables, a small playground, and a gateway pavilion. It includes the Gateway Park West Trail with a pedestrian bridge over the creek.	1.9
Harbor View Park	Part of the Shoreline park system, Harborview has a ball-field, play areas, half basketball court, and restrooms, plus drop-in picnic areas that can also be reserved.	2.5
Indian Springs Park	Indian Springs Park was recently updated to include two climbing structures in the playground and also includes picnic areas, restrooms, and a passive lawn.	2.7
Laguna Vista	Laguna Vista Open Space has the Bay Trail bike path making a loop around an open grassy undeveloped area.	2.0
Laurelwood Park	This park is adjacent to Sugarloaf Mountain and has serene walking areas and a playground as well as trails leading into Sugarloaf Mountain.	7.0

## PARKS AND RECREATION

**Table 4.12-1 Parks and Open Space in San Mateo**

Park	Description	Acres
Laurie Meadows Park	This park includes a large lawn area containing a softball backstop, a walking path around the perimeter, and two separate playground areas with picnic tables.	5.3
Mariners Island Park	This neighborhood park includes two play areas, a grassy area, a baseball diamond, and picnic tables.	4.0
Meadows Square	Meadow Square has play equipment, a walking path around the park, trees, and a lawn for passive use.	1.4
Paddock Park	This new neighborhood park provides a playground, picnic tables, restrooms, an open lawn area, and even a half basketball court.	1.5
Saratoga Square	This park has a playground structure with swings and a large grassy area. There is a track around the park for bikes and public restrooms.	2.0
Trinta Park	Park amenities include two baseball diamonds, playground, and half basketball court.	2.0
West Hillsdale Park	This park includes a playground, basketball court, and passive lawn.	1.6
<b>Subtotal – Neighborhood Parks</b>		<b>43.7</b>
<b>Mini Parks</b>		
Bay Meadows Linear Park	This park is an elegant parkway with a rich array of gathering spaces set within a beautiful garden. This park has a large open central lawn and arbors covering the picnic tables.	1.5
Bay Tree Park	This pocket park is named after the huge bay tree on the corner and has grassy areas and a few park benches.	0.4
Concar Playground	This park contains a children's playground, a sandbox, and picnic areas. There are different play structures for toddlers and older children.	0.4
Dale Ave Open Space	Dale Avenue Open Space is a vacant lot currently being use by the Wastewater Treatment Plant during the construction of the new facilities.	1.1
DeAnza Historical Park	Located along the San Mateo Creek, this park is the historical camping spot of Juan Bautista of the de Anza expedition, 1776.	1.4
Hayward Square Park	This small neighborhood park has a picnic table, trees, and a grassy central lawn.	0.2
Landing Green Park	This slim park has grassy lawns, picnic tables, benches, trellis, a bocce ball court, and plenty of vegetation.	1.5
Sunnybrae Playground	This neighborhood park contains swings, slides, picnic areas, and separate playgrounds for toddlers and older children.	0.4
Washington Playground	This park includes a full basketball court, trees, swings, picnic benches, and play structures for both toddlers and older children.	1.1
<b>Subtotal – Mini Parks</b>		<b>8.0</b>
<b>Grand Total</b>		<b>794 acres</b>

Source: Joanne Magrini (Director), March 15, 2023, email to PlaceWorks, City of San Mateo Parks and Recreation.

## Recreational Facilities

The San Mateo Parks and Recreation Department offers a variety of recreation facilities, including six recreation/community centers, two pools, two community gardens, an estuary lagoon for boating, and



## PARKS AND RECREATION

the Poplar Creek 18-hole Golf Course.<sup>7</sup> The City's recreation services provide opportunities for people of all ages to participate in community activities, including youth and family aquatics, children summer camps, adult fitness programs, youth programs for teens, and interactive classes for older adults and seniors. The City hosts special community events throughout the year, including Eggstravaganza, the Winter Wonderland, Movies in the Park, and the Central Park Music Series. These events are long-standing traditions that help to build community and provide family-friendly fun for San Mateo residents.

### 4.12.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant park and recreation impact if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities, need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks or recreation facilities.
2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
4. In combination with past, present, and reasonably foreseeable projects, result in cumulative parks and recreation impacts in the area.

### 4.12.3 IMPACT DISCUSSION

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REC-1	<b>The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities, need for new or physically altered parks or recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks or recreation facilities.</b>
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As discussed in Section 4.12.1, *Environmental Setting*, the EIR Study Area currently provides 7.35 acres of parks per 1,000 residents. Implementation of the proposed project could introduce new residents, which would increase the demand for parks and recreational facilities. If no further parkland is added by 2040, and the existing 794 acres of parkland serve the projected total 2040 population of 160,040 people, then the ratio of parkland per 1,000 population would decrease to 4.96 acres of parks per 1,000 residents.<sup>8</sup> However, this is a very conservative assumption (i.e., it represents a “worst case” scenario); it is expected

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<sup>7</sup> City of San Mateo Website, 2021, Parks and Facilities, <https://www.cityofsanmateo.org/559/Parks-and-Facilities>, accessed July 27, 2022.

<sup>8</sup> 160,040 population / 1,000 = 160; 794 acres / 160 = 4.96 acres per 1,000 population.

## PARKS AND RECREATION

that parks will be acquired, expanded, and/or made publicly accessible as part of private development over the horizon of the proposed General Plan.

The Conservation, Open Space, and Recreation (COS) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on available parkland and the quality of facilities. The following General Plan 2040 goals, policies, and actions would serve to reduce impacts to parks, recreation, and open space in the EIR Study Area:

- **Goal COS-2:** Ensure that current and future generations will enjoy the environmental, social, health, and economic benefits derived from access to our urban forest, parks, and open spaces.
  - **Policy COS 2.1: Preservation of Open Space.** Preserve, protect, and enhance open space areas in San Mateo that provide health benefits and access to nature for all residents.
  - **Policy COS 2.2: Sustainable Access.** Continue to design and manage public access to the City's natural resources, including open space areas, in a way that promotes public health and connection to nature while avoiding or minimizing disturbance and sustaining these resources into the future.
  - **Policy COS 2.3: Equitable Conservation.** Prioritize preservation, restoration, rewilding, and enhancement of natural landscapes in or near underserved communities for their role in improving air quality and community health.
  - **Policy COS 2.5: Marina Lagoon and Shoreline Public Access.** New development having frontage on Marina Lagoon shall provide and retain public access to provide a connection to the Marina Lagoon.
  - **Policy COS 2.6: Sugarloaf Mountain Management.** Improve, maintain, and manage the natural qualities and habitat of Sugarloaf Mountain and Laurelwood Park, including management of public access, study, recreation, and wildland fire hazards.
  - **Policy COS 2.7: Sugarloaf Mountain Interpretive Opportunities.** Promote public awareness of the value and care of Sugarloaf Mountain through on-site interpretive programs or displays that are in character with the open space, consistent with the adopted management plan.
  - **Action COS 2.8: Improvements to Bayfront Nature Area.** Review plans for the remaining uncompleted portions of Shoreline Park, including the Bayfront Nature Area, Bay Marshes, and J. Hart Clinton Drive to ensure they reflect current environmental and programmatic needs.
- **Goal COS-5:** Provide a comprehensive system of park and recreation programs and facilities based on the needs of the city's residents to encourage healthy lifestyles and ensure access for all.
  - **Policy COS 5.9: Conservation and Nature Awareness.** Increase public awareness of the importance of and appreciation for conservation opportunities and the value of connecting children to nature with enhanced programs and public outreach.
  - **Policy COS 5.10: Community Gardens.** Support community gardens on sites with quasi-public uses and on publicly owned land, such as City parks or facilities, or as part of new private development, where feasible and appropriate.

## PARKS AND RECREATION

- **Policy COS 5.11: Central Park.** Promote Central Park's character as the City's signature park and community gathering place.
- **Goal COS-6:** Provide equitable and convenient access to parks, recreational programs, and facilities so that all residents experience the physical and mental health benefits of parks and open space.
  - **Policy COS 6.1: Accessible Facilities.** Continue to provide general park facilities that are free and open to the public, except for reservations of specific facilities by groups or individuals, or for facilities that traditionally charge fees (e.g., Golf Course, Marina Lagoon boat access). Address the lack of access to recreational facilities for neighborhoods east of El Camino Real, especially east of US Highway 101.
  - **Policy COS 6.2: Recreation Fee Assistance.** Continue to provide program fee assistance to qualifying families and older adults consistent with the Park and Recreation Commission-endorsed administrative policy for fee assistance.
  - **Policy COS 6.3: Privately Owned Public Spaces.** Require privately owned publicly accessible open space to be designed in a way that is welcoming for all, including public access signage and minimal physical or visual barriers, to ensure that the space is open and available to the community.
  - **Policy COS 6.4: Equitable Access Analysis.** When developing park master plans, include an equitable access analysis to identify deficiencies and potential solutions to address deficiencies found in the analysis.
  - **Action COS 6.6: Inclusion and Accessibility.** Create policies, programs, and facility designs that are age-integrated, inclusive, respectful, and supportive for all members of the community. Expand cultural awareness and appreciation through culturally relevant programs and special events.
  - **Action COS 6.7: Privately Owned Public Spaces Inventory.** Develop and maintain a list of all publicly accessible private open space in the city.
  - **Action COS 6.8: Resident Input.** Solicit a broad spectrum of resident input for major park improvements or park master plans. Conduct multilingual and culturally sensitive outreach to ensure all voices are included in park planning efforts and that San Mateo's parks reflect the diversity of the community.
  - **Action COS 6.9: Public Information.** Communicate through diverse channels and in multiple languages the benefits and value park and recreation services bring in making San Mateo a more livable, economically viable, and socially responsible community.
  - **Action COS 6.10: Technology Innovation.** Identify and incorporate technology innovations as an ongoing strategy to better serve the public, e.g., virtual trail maps, digitalized park signage, virtual programming.
- **Goal COS-7:** Provide the appropriate mix of parks and facilities that balances the needs of active and passive facilities, allows formal and informal uses, is accessible for all residents, and meets existing and future recreation needs.

## PARKS AND RECREATION

- **Policy COS 7.1: Facility Standards.** Use the Park and Recreation Facility Standards to assess the adequacy of existing facilities; to design, develop, and redevelop sites; and to acquire or accept new sites.
- **Policy COS 7.2: Acreage Standards.** Acquire or accept for dedication two acres of neighborhood and community parks per 1,000 residents.
- **Policy COS 7.3: Walkable Parks and Amenities.** Provide accessible public park or other recreational opportunities that are within approximately one-third of a mile (a 15-minute walk) of residents without travel over significant barriers. Ideally, one or more of the following amenities should be available: multipurpose turf area, children's play area with preschool and youth apparatus, seating areas, picnic areas, a multiuse court, and an opportunity for passive enjoyment of an aesthetically landscaped space.
- **Policy COS 7.4: Passive Recreation.** Support efforts to create a passive recreation system that connects parks and nodes in the city to increase connectivity on select public rights-of-way for pedestrians.
- **Policy COS 7.5: Active Use Facilities.** Provide sufficient active-use facilities to support current needs and future trends, including, but not limited to, multiuse athletic turf areas; court games; action sports, e.g., bicycling; and a system of pedestrian and bicycle trails that will provide interconnectivity between parks.
- **Policy COS 7.6: Master Planning.** Continue to prepare and maintain master plans for all undeveloped parks and for those parks over two acres prior to development or major redevelopment. Allow interim uses if such uses will not adversely impact or limit potential permanent uses.
- **Policy COS 7.7: Rehabilitation or Purchase of School Sites.** Consider contributions towards rehabilitation or the purchase of recreational facilities on surplus school sites based on an evaluation of their value as community recreation resources.
- **Action COS 7.8: Regional Facilities.** Explore the feasibility of developing regional recreational and sports complexes with neighboring cities.
- **Action COS 7.9: Bay Meadows Community Park.** Complete the master planning for Bay Meadows Community Park to reflect its value as a city-wide asset that can address one or more identified facility deficiencies.
- **Goal COS-8:** Plan and develop well-designed parks and recreation facilities compatible with surrounding uses that promote accessibility, efficient use, and practical maintenance.
  - **Policy COS 8.1: Rehabilitation Priorities.** Prioritize parks and recreation facilities projects that rehabilitate facilities that have become or will become costly to maintain, only marginally usable, meet the highest community needs, provide significant benefits in relation to costs, or are in equity priority communities.
  - **Policy COS 8.2: Park Preservation.** Preserve existing parklands, open spaces, and the golf course for open space, habitat, and recreational use.

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- **Policy COS 8.3: Shared Use.** Encourage schools to make their facilities available for City and community-sponsored activities to the greatest extent possible and encourage school agencies to adopt reasonable user fees and operating practices that allow improved community access.
- **Policy COS 8.4: Optimum Cost-Effectiveness.** Proactively maintain and upgrade park infrastructure to optimize its cost-effectiveness and value in meeting community recreation needs.
- **Policy COS 8.5: Sustainability Practices.** Operate park and recreation facilities using environmentally, socially, and economically sustainable management and operating practices that proactively reverse the impacts of climate change or better prepare for its effects.
- **Policy COS 8.6: Maintenance Standards.** Maintain the park system by a set of maintenance standards that reflects community values; maintains, promotes, and optimizes positive use; reduces wildfire risk; and ensures that equipment and facilities are maintained in a safe condition.
- **Policy COS 8.7: Environmentally Sound Park Operations.** Use native and drought-tolerant plant species, efficient irrigation systems, reclaimed water, and sustainable management practices. Expand efforts to improve recycling opportunities in all parks and implement trash-reduction measures, especially during large community events.
- **Policy COS 8.8: San Mateo City Parks and Recreation Foundation.** Continue to support the San Mateo City Parks and Recreation Foundation efforts to expand non-city resource opportunities, such as funding and volunteers, in support of park development, improvements, and maintenance.
- **Action COS 8.9: Recreation Facility Infrastructure.** Implement the highest-priority improvements identified from the Recreation Facilities Master Plan with special focus on improvements that address safety and accessibility, geographic equity, childcare, aquatics, and multigenerational programming.
- **Action COS 8.10: Design Principles and Park Image.** Establish design principles for all new or renovated parks to maximize productivity, efficiency, and community value, including adding the potential for flexible use for emergency shelters and disaster response. Develop an image plan that includes the effective use of signage, color, lighting, and plant material that meets both aesthetic and maintenance needs.
- **Action COS 8.11: Maximized Park Assets.** Review and update the Asset Management Plan to identify the highest and best use of undeveloped parcels or underutilized areas within existing parks to ensure they are best positioned to meet current and future needs.
- **Action COS 8.12: Strategic Community Partnerships.** Develop and maintain positive partnership relations with schools, businesses, community groups, and civic organizations for park access, maintenance, and enhancement to maximize resources, eliminate duplication of effort, and reach common goals.
- **Action COS 8.13: Neighborhood-Supported Projects.** Increase efforts to seek neighborhood support for enhancement and beautification projects as the City's fiscal resources become constrained. Prioritize enhancement and beautification efforts in equity priority communities.

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- **Action COS 8.14: School Facility Access.** Partner with local school districts to explore ways to expand public access to school facilities, including gymnasiums and swimming pools.
- **Goal COS-9:** Provide stable and adequate operational and capital funding for the parks and recreation system.
  - **Policy COS 9.1: Program Fees and Cost Recovery.** Maintain and periodically update program fees to recover costs.
  - **Policy COS 9.2: Maintenance and Operating Costs.** Consider long-term maintenance and operating costs in acquisition, development, and redevelopment decisions.
  - **Policy COS 9.3: Park Equipment and Maintenance.** Phase out the use of gas-powered equipment and increase the use of more environmentally friendly fertilization options in City parks and facilities over time.
  - **Policy COS 9.4: Parks and Facilities in Major Projects.** Factor park and facility maintenance and operating costs into park master plans or major facility upgrades.
  - **Policy COS 9.5: Development Fees.** Assess appropriate fees and taxes to ensure that new development contributes proportional funding to compensate for its impacts on recreation facilities and services.
  - **Policy COS 9.6: Cooperative Service Delivery.** Use opportunities for cooperative acquisition, development, operation, and programming with private organizations or other public agencies that will provide more effective or efficient service delivery.

Additionally, SMMC Chapter 26.64 would continue to require residential subdivisions to either provide parkland or pay in-lieu fees for the City to dedicate parkland elsewhere. This would result in an incremental addition of parkland if a residential subdivision is proposed in the city.

As shown in the proposed General Plan goals, policies, and actions listed above, the City would update existing parks and acquire new parks in San Mateo over the 2040 horizon of the proposed project. In addition, new residential development would be required to pay park impact fees to generate revenue to fund the park facilities needed to serve new development. New residential development is required to pay the City's impact fees that are adopted at the time of future project approval. Implementation of the proposed General Plan goals, policies, and actions listed above, and ongoing collection of impact fees, would help to ensure that acceptable service levels are maintained.

As indicated above, new residents from development allowed by the proposed project would increase the demand for park facilities, and park standards would require the construction of new or expanded neighborhood or community parks in order to continue meeting the City's parkland standard of 2 acres per 1,000 residents. The proposed General Plan is a policy-level document and does not propose specific development projects. The estimated timing or location of such facilities or the exact nature of these facilities are not known, so project-specific environmental impacts that would occur from their construction and operation cannot be determined at this time. However, depending on the type, size, and location of new parks, the construction of new parks would be subject to environmental review and the mitigating policies and mitigation measures described in this EIR to ensure the impacts from the construction would be less than significant. The construction of project-specific parks would require



## PARKS AND RECREATION

permitting and review in accordance with City standards, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. Therefore, the impact is considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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REC-2	The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
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Future development in San Mateo would result in increased population, which would increase demands for parks and recreational facilities in the EIR Study Area and regional parks in the larger San Mateo County area. The increased number of residents and workers anticipated by 2040 could increase park use and cause physical deterioration of park facilities. However, population increases in San Mateo would occur incrementally over time. As described in Section 4.12.1, *Environmental Setting*, the SMMC establishes parkland dedication and/or fee requirements for new residential development, helping to ensure that new park and recreation facilities are provided as growth occurs and that individual park and recreation facilities are not overburdened by use. However, as discussed in impact discussion REC-1, even if no additional parkland is added, buildout of the proposed project would result in a parkland ratio of 4.96 acres of parks per 1,000 residents<sup>9</sup> and would continue to exceed the City's parkland standard of 2 acres per 1,000 residents.

As described in impact discussion REC-1, the Conservation, Open Space, and Recreation (COS) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on existing parks and the quality of the facilities.

While potential future development under implementation of the proposed project would result in an increased population with an increased demand for parks and recreational facilities, buildout would occur incrementally throughout the 20-year horizon, and future development would be subject to the proposed General Plan goals, policies, and actions listed in impact discussion REC-1; therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<sup>9</sup> 160,040 population / 1,000 = 160; 794 acres / 160 = 4.96 acres per 1,000 population.

## PARKS AND RECREATION

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<b>REC-3</b>	<b>The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.</b>
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A significant impact would result if the proposed project would cause the construction or expansion of recreational facilities.

The Conservation, Open Space, and Recreation (COS) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on parks and recreation facilities. Several proposed General Plan goals, policies, and actions, as listed under impact discussion REC-1, ensure that parks and recreational facilities are provided, and that facilities are maintained. While potential future development under implementation of the proposed project would result in an increased population with an increased demand for parks and recreational facilities, buildout would occur incrementally throughout the 20-year horizon, and future development would be subject to these proposed General Plan goals, policies, and actions to plan for and provide recreational facilities for existing and future users. New residents from development allowed by the proposed project would increase the demand for recreational facilities, and recreational facility standards would require the construction of new or expanded recreation facilities. The proposed General Plan is a policy-level document and does not propose specific development projects. The estimated timing or location of such facilities or the exact nature of these facilities are not known, so project-specific environmental impacts that would occur from their construction and operation cannot be determined at this time. The construction of project-specific recreational facilities would require permitting and review in accordance with City standards, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. Therefore, the impact is considered *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>REC-4</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative parks and recreation impacts in the area.</b>
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As discussed in Chapter 4, *Environmental Analysis*, of this Draft EIR, the cumulative analysis takes into account growth from development under the proposed project within the City combined with the estimated growth in the service areas of each service provider. Parks and recreation services in the EIR Study Area are provided by the City, and regional parks are provided by the County of San Mateo's Parks and Recreation, California Department of Parks and Recreation, California Fish and Wildlife Service, and the United States Fish and Wildlife Service.

Future growth in the area would result in increased demand for parks and recreational facilities throughout the city and region. As a result, and as described in impact discussion REC-1 and REC-2, the City would need to expand and construct additional parks and other recreational facilities to meet the increased demand and maintain existing service levels. State law allows jurisdictions to require additional development to fund park improvements, and the City requires new residential development

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to pay development impact fees to help fund parks and recreation. Proper implementation of the proposed General Plan goals, policies, and actions listed under impact discussion REC-1 would also help provide new parklands along with new development. The final location and size of additional facilities would be determined as part of future development activity, and as specific parkland expansion or improvement projects are identified. Additional project-specific environmental analysis would be completed at that future time. As a result, the proposed project would not result in a cumulatively considerable impact to parks and recreational facilities and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## 4.13 POPULATION AND HOUSING

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential population and housing impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.13.1 ENVIRONMENTAL SETTING

#### 4.13.1.1 REGULATORY FRAMEWORK

##### State Regulations

###### *California Housing Element Law*

California Housing Element Law<sup>1</sup> includes provisions related to the requirements for housing elements of local government General Plans. Among these requirements, some of the necessary parts include an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. Additionally, in order to assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goals, this section of the Government Code calls for local jurisdictions to plan for and allow the construction of a share of the region's projected housing needs, known as the Regional Housing Needs Allocation (RHNA). The City of San Mateo needs to accommodate 7,015 residences in total. The City's 2023-2031 Housing Element was adopted on January 24, 2023.

###### *Housing Opportunity and More Efficiency Act*

The Housing Opportunity and More Efficiency (HOME) Act (Senate Bill [SB] 9) was signed in September 2021 and went into effect in January 2022. The HOME Act streamlines the process for a homeowner to create a duplex or subdivide an existing lot, with the effect of legalizing fourplexes in areas that previously only allowed one home.<sup>2</sup> To be eligible for the streamlining process under the HOME Act, a parcel must meet a specific list of qualifications that protects historic districts, preserves the environmental quality and visual characteristics of communities, and prevents tenants from being displaced. Homeowners would still be required to comply with local zoning requirements, such as, but not limited to, height, floor area ratios, and lot coverage, when developing a duplex as long as they do not physically preclude a duplex.

<sup>1</sup> Government Code Section 65580 through 65589.8.

<sup>2</sup> California Senate, SB 9 (Atkins): The California H.O.M.E. Act, <https://focus.senate.ca.gov/sb9>, accessed May 25, 2023.

## POPULATION AND HOUSING

### *The Housing Crisis Act*

Senate Bill 330 (SB 330), or the Housing Crisis Act of 2019, aims to address California's housing shortage by expediting the approval process for housing development of all types, particularly in regions suffering the worst housing shortages and highest rates of displacements. To address the crisis, this bill prohibits some local discretionary land use controls currently in place and generally requires cities to approve all housing developments that comply with current zoning codes and general plans. SB 330 requires that a housing development project only be subject to the ordinances, policies, and standards adopted and in effect when a preliminary application is submitted, notwithstanding the provisions of the HAA or any other law, subject to certain exceptions.

### *State Density Bonus Law*

The State Density Bonus Law (California Government Code Sections 65915-65918) encourages the development of affordable and senior housing, including up to a 50 percent increase in project densities for most projects, depending on the amount of affordable housing provided. Cities and counties are required to grant a density bonus and other incentives or concessions to housing projects which contain one of the following:

- At least 5 percent of the housing units are restricted to very low income residents.
- At least 10 percent of the housing units are restricted to lower income residents.
- At least 10 percent of the housing units in a for-sale common interest development are restricted to moderate income residents.
- 100 percent of the housing units (other than manager's units) are restricted to very low, lower and moderate income residents (with a maximum of 20 percent moderate).
- At least 10 percent of the housing units are for transitional foster youth, disabled veterans or homeless persons, with rents restricted at the very low income level.
- At least 20 percent of the housing units are for low income college students in housing dedicated for full-time students at accredited colleges.
- The project donates at least one acre of land to the city or county for very low income units, and the land has the appropriate general plan designation, zoning, permits and approvals, and access to public facilities needed for such housing.
- The project is a senior citizen housing development (no affordable units required).
- The project is a mobile home park age-restricted to senior citizens (no affordable units required).

The City of San Mateo has adopted the State Density Bonus law by reference in Section 27.15.010, *Density Bonus and Other*, in its Municipal Code.

### *Assembly Bill 1397*

California's AB 1397 amended Sections 65580, 65583, and 65583.2 of the Government Code, relating to housing by revising what could be included in a local government's inventory of land suitable for

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residential development. AB 1397 changed the definition of land suitable for residential development to increase the number of multifamily sites. Identified sites must be “available” and “suitable” for residential development and have a “realistic and demonstrated potential” for redevelopment during the planning period. In addition, AB 1397 requires housing element inventory sites to be 0.5 acre to 10 acres, have sufficient infrastructure, or be included in a program to provide such infrastructure, to support and be accessible for housing development. The local government must specify the realistic unit count for each site and whether it can accommodate housing at various income levels.

### *Senate Bill 166*

SB 166 (2017) requires a local government to ensure that its housing element inventory can accommodate its share of the regional housing need throughout the planning period. It prohibits them from reducing, requiring, or permitting the reduction of the residential density to a lower residential density than what was used by the California Department of Housing and Community Development for certification of the housing element, unless the city or county makes written findings supported by substantial evidence that the reduction is consistent with the adopted general plan, including the housing element. In such cases, any remaining sites identified in the housing element update must be adequate to accommodate the jurisdiction’s share of the regional housing need. A local government may reduce the residential density for a parcel only if it identifies sufficient sites remaining within the housing element as replacement sites, so that there is no net loss of residential unit capacity.

## Regional Regulations

*Plan Bay Area* is the regional transportation plan/sustainable community strategy, as mandated by the Sustainable Communities and Climate Protection Act (Senate Bill 375). *Plan Bay Area* lays out a development scenario for the nine-county Bay Area region that works to align transportation and land use planning in order to reduce vehicle miles traveled through modified land use patterns. The current *Plan Bay Area* projects growth and development patterns through 2050 and was recently adopted in October 2021.<sup>3</sup>

*Plan Bay Area* is prepared and regularly updated by the Metropolitan Transportation Commission (MTC) in partnership with the Association of Bay Area Governments (ABAG), Bay Area Air Quality District (BAAQMD), and the Bay Conservation and Development Commission (BCDC). Each of the agencies has a different role in regional governance. ABAG primarily does regional land use planning, housing, environmental quality, and economic development; MTC is tasked with regional transportation planning, coordinating, and financing; BAAQMD is responsible for regional air pollution regulation; and BCDC’s focus is to preserve, enhance, and ensure responsible use of the San Francisco Bay.

As described in Chapter 4, *Environmental Analysis*, and Chapter 4.10, *Land Use and Planning*, of this Draft EIR, *Plan Bay Area* designates Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) throughout the region. PDAs are areas along transportation corridors which are served by public transit

<sup>3</sup> Metropolitan Transportation Commission and Association of Bay Area Governments, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed August 9, 2022.



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that allow opportunities for development of transit-oriented, infill development within existing communities that are expected to host the majority of future development. TPAs are similar in that they are formed within one-half mile around a major transit stop such as a transit center or rail line. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4, the EIR Study Area has four PDAs. The PDAs include the Grand Boulevard Initiative, Downtown, Rail Corridor, and El Camino Real PDAs.

*Plan Bay Area 2050* distributes future growth across the San Francisco Bay Area region in order to meet its GHG emissions reduction, housing, and other performance targets, but it is not intended to override local land use control. Cities and counties, not MTC/ABAG, are ultimately responsible for the manner in which their local communities continue to be built out in the future. For this reason, cities and counties are not required to revise their land use policies and regulations, including general plans, to be consistent with the regional transportation plan or an alternative planning strategy. Rather than increase regional land use control, *Plan Bay Area 2050* facilitates implementation by expanding incentives and opportunities available to local jurisdictions to support growth in PDAs. In addition to funding transportation and planning projects in PDAs, *Plan Bay Area 2050* sets the stage for cities and counties to increase the efficiency of the development process, if they choose, for projects consistent with *Plan Bay Area* and other state legislation.<sup>4</sup>

### Local Regulations

#### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to population and housing are primarily in the Housing Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.13.3, *Impact Discussion*.

#### *City of San Mateo Municipal Code*

The San Mateo Municipal Code (SMMC) includes various directives pertaining to population and housing. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to population and housing impacts are included in Title 27, *Zoning*.

- Chapter 27.16, *Residence Districts*, serves to protect and provide a variety of housing opportunities. It also promotes residential development that is compatible with environmental constraints and neighborhood characteristics.
- Chapter 27.29, *Residential Overlay District – Mixed Use*, encourages residential development as part of mixed-use development; doing this meets housing needs and supports local business.

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<sup>4</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, 2022, Frequently Asked Questions: Does *Plan Bay Area* override local land use control?, <https://www.planbayarea.org/2040-plan/quick-facts/faq-page#n4851>, accessed August 31, 2022.

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- Chapter 27.30, *C1 Districts – Neighborhood Commercial*, maintains neighborhood shopping areas and keeps them in compliance with the surrounding neighborhood.
- Chapter 27.32, *C2 Districts –Regional/Community Commercial*, creates and maintains major commercial centers and encompasses a broad range of office, retail, and personal services.
- Chapter 27.34, *C3 Districts – Regional/Community Commercial*, builds from Chapter 27.32 and allows a more diverse range of uses.
- Chapter 27.38, *CBD Districts – Central Business District*, encourages existing downtown structures to be re-used and not torn down. It also advocates that the ground floor be dedicated to pedestrian use while the upper floors be used as either residences or office space. Higher-intensity uses (including increased housing densities) are encouraged in these areas than in other areas, allowing a concentration of development and activity, similar to a major business center.

### 4.13.1.2 EXISTING CONDITIONS

This section describes the existing population and housing conditions in the City of San Mateo, as well as San Mateo County as a whole, to provide context for the analysis of the proposed project in this EIR. This section uses 2019 data because 2019 is the baseline year for purposes of most analyses in this EIR, as explained in Chapter 4.0, *Environmental Analysis*.

## Population

The City of San Mateo has the largest population in San Mateo County. The city's population grew from 92,207 in 2010 to 108,020 in 2019. As shown in Table 4.13-1, *Total Population, 2010 to 2019*, the population growth was approximately 17 percent; higher than the level of population growth in San Mateo County as a whole, which was only 6 percent during the same period.

**TABLE 4.13-1 TOTAL POPULATION, 2010 TO 2019**

	2010	2015	2019	Total Change	Total Percent Change
San Mateo EIR Study Area	92,207 <sup>a</sup>	101,884 <sup>a</sup>	108,020	15,813	17%
San Mateo County	726,732	761,621	771,160	44,428	6%

Note:

a. 2010 and 2015 numbers do not include San Mateo's SOI.

Source: State of California, Department of Finance, May 2021, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2020*, <https://dof.ca.gov/forecasting/demographics/estimates/estimates-e5-2010-2020/>, accessed August 2, 2022; State of California, Department of Finance, May 2022, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2021-2022*, <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/>, accessed August 2, 2022.

## Housing

Between 2010 and 2019, San Mateo has experienced steady housing growth. As shown in Table 4.13-2, *Housing Units, 2010 to 2019*, the city's number of housing units grew by approximately 9 percent; this growth was higher than the level of housing growth in San Mateo County as a whole, which was 3 percent during the same period. As of 2019, the average household size in the City of San Mateo is 2.6

## POPULATION AND HOUSING

persons per household while San Mateo County's average person per household is 2.9 persons per household.

**TABLE 4.13-2 HOUSING UNITS, 2010 TO 2019**

	2010	2015	2019	Total Change	Total Percent Change
San Mateo EIR Study Area	40,014 <sup>a</sup>	40,387 <sup>a</sup>	43,770	3,756	9%
San Mateo County	271,031	274,612	279,248	8,217	3%

Note:

a. 2010 and 2015 numbers do not include San Mateo's SOI.

Source: State of California, Department of Finance, May 2021, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2020*, <https://dof.ca.gov/forecasting/demographics/estimates/estimates-e5-2010-2020/>, accessed August 2, 2022; State of California, Department of Finance, May 2022, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2021-2022*, <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/>, accessed August 2, 2022.

### 4.13.1.3 REGIONAL GROWTH PROJECTIONS

*Plan Bay Area 2050* includes growth projections to 2050 for counties within the region. *Plan Bay Area 2050* projections anticipate the number of housing units in San Mateo County to increase by 48 percent, with jobs projected to increase by 29 percent.<sup>5</sup> However, *Plan Bay Area 2050* only provides projections at the county and sub-county level and not at the city level. Therefore, growth projections from *Plan Bay Area 2040*, which includes city-level projections, are utilized in this discussion. Growth forecasts for the City of San Mateo and San Mateo County are shown below in Table 4.13-3, *Regional Growth Projections, 2019-2040*.

**TABLE 4.13-3 REGIONAL GROWTH PROJECTIONS, 2019 TO 2040**

	2019	2040	Total Change	Total Percent Change
<b>San Mateo</b>				
Population	108,020 <sup>a</sup>	133,005	24,985	23%
Housing Units	43,770 <sup>a</sup>	51,400	7,630	17%
Jobs	62,440 <sup>a</sup>	68,010	5,570	9%
<b>San Mateo County</b>				
Population	726,732	916,590	189,858	26%
Housing Units	271,031	323,755	52,724	19%
Jobs	447,600	472,045	24,445	5%

Note:

a. 2019 numbers for San Mateo are the baseline data developed for this EIR, as discussed in Chapter 3.0, *Project Description*.

Source for 2040 numbers: Association of Bay Area Governments and Metropolitan Transportation Commission, updated May 1, 2019, *Projections 2040 by Jurisdiction*, <https://data.bayareametro.gov/Demography/Projections-2040-by-Jurisdiction/grqz-amra>, accessed February 16, 2023.

<sup>5</sup> Association of Bay Area Governments and the Metropolitan Transportation Commission, updated January 2021, *Plan Bay Area 2050, The Final Blueprint: Growth Pattern*, [https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease\\_December2020\\_GrowthPattern\\_Jan2021Update.pdf](https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf), accessed August 2, 2022.

## POPULATION AND HOUSING

### Priority Development Areas

As described in Chapter 3, *Project Description*, of this Draft EIR, most of the growth projected to occur under the proposed General Plan 2040 would occur within the ten General Plan Land Use Study Areas. The General Plan Land Use Study Areas were selected by the community and had the following characteristics: are near transit; contain aging shopping centers; or are areas where people have expressed interest in considering redevelopment of the property. As discussed in Chapter 4, *Environmental Analysis*, and shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, of this Draft EIR, the EIR Study Area has four PDAs, which fall within the General Plan Land Use Study Areas. These PDAs are the Grand Boulevard Initiative PDA, Downtown PDA, Rail Corridor PDA, and El Camino Real PDA. Because *Plan Bay Area 2050* anticipates the majority of growth in the Bay Area will occur in PDAs, all of these PDA areas are anticipated to experience growth through the proposed project's 2040 horizon year.

### Regional Housing Needs Allocation

As the San Francisco Bay Area's regional agency, MTC/ABAG calculates the RHNA for jurisdictions in San Mateo County, including San Mateo. Table 4.13-4, *San Mateo Regional Housing Needs Allocation*, shows the RHNA for the current planning period, which is the number of housing units the City of San Mateo would need to accommodate by 2031. As shown in Table 4.13-4, the housing unit allocations are categorized by household size and income. The household income categories are as follows:

- Very Low Income: Households making less than 50 percent of the area median income.
- Low Income: Households making between 50 and 80 percent of the area median income.
- Moderate Income: Households making between 80 and 120 percent of the area median income.
- Above Moderate Income: Households making more than 120 percent the area median income.

Household median income is calculated based on household size. In 2019, the median income in San Mateo County for a single-person household was \$95,750. The median income in San Mateo County for a family of three in 2019 was \$123,100, and \$158,700 for a family of six.<sup>6</sup>

**TABLE 4.13-4 SAN MATEO REGIONAL HOUSING NEEDS ALLOCATION**

RHNA Planning Period	Dwelling Units by Income Category				Total
	Very Low Income	Low Income	Moderate Income	Above Moderate Income	
2023 to 2031	1,177	1,023	1,175	3,040	7,015

Source: City of San Mateo, January 2023, *Housing Element of the General Plan 2023-2031*, <https://www.cityofsanmateo.org/DocumentCenter/View/90119/2023--2031-San-Mateo-Housing-Element?bidId=>, accessed February 16, 2023.

<sup>6</sup> California Department of Housing and Community Development, May 6, 2019, State Income Limits for 2019, <https://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits/docs/income-limits-2019.pdf>, accessed February 16, 2023.

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### 4.13.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant population and housing impacts if it would:

1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
3. In combination with past, present, and reasonably foreseeable projects, result in cumulative population and housing impacts in the area.

### 4.13.3 IMPACT DISCUSSION

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POP-1	<b>The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).</b>
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As described in Chapter 3, *Project Description*, of this Draft EIR, the proposed General Plan 2040 is a high-level policy document that will replace the existing General Plan 2030 as the City's overarching policy document that defines a vision for future change and sets the "ground rules" for planned growth. The proposed project considers growth over an approximately 20-year period but does not include specific development proposals. The proposed General Plan is the policy document that projects the amount of reasonably foreseeable growth given past growth trends and the ability of existing services and infrastructure to support future growth. The proposed CAP update carries forward the strategies in the City's existing CAP and updates inventory and forecast numbers for consistency with the General Plan and new State targets; it does not set forth any land use regulations that would create direct or indirect growth.

The buildout projections evaluated in this EIR include growth associated with current development projects, development of the sites in the City's 2023-2031 Housing Element Sites Inventory, and development of accessory dwelling units and units under SB 9 as allowed under State housing law. Potential future development in the city is projected to occur primarily in the ten General Plan Land Use Study Areas, which include areas where current buildings are aging, vacant, or not maintained and areas where property owners have expressed interest in considering redevelopment of the property. In addition, these areas contain PDAs, which are expected by ABAG to be where future growth will be concentrated. Given that future growth would occur in areas currently served by public services and infrastructure, implementation of the proposed project would require less extension and improvement of infrastructure than if development were to occur on "greenfield" sites. Therefore, the proposed project would not induce substantial, unplanned population growth directly or indirectly in any particular location but instead includes policy guidance for expected incremental planned growth through 2040.

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The EIR Study Area has a population of approximately 108,020 with 43,770 housing units as of 2019. As shown in Table 3-1, *Proposed General Plan 2040 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*, of this Draft EIR, the proposed General Plan estimates an overall increase of 21,410 housing units and 52,020 residents in the EIR Study Area by 2040. This equates to a 49 percent increase in housing units and a 48 percent increase in total population over the 20-year horizon of the proposed General Plan. However, approximately 29 percent of the added 21,410 housing units anticipated by 2040 are units already accounted for in the City's development pipeline, including projects that are under review or approved (see Appendix B, *Projects Included in Buildout Projections*, of this Draft EIR). Approximately 33 percent of this residential growth would come from the City's 2023-2031 RHNA allocation of 7,015 units, which is housing growth required by the California Housing Law and not by the City.

As shown in Table 4.13-3, regional projections for San Mateo anticipate a 23 percent increase in population, 17 percent increase in housing units, and 9 percent increase in jobs. Development potential under the proposed General Plan 2040 would result in a 48 percent increase in total population, 49 percent increase in housing units, and 27 percent increase in jobs. Therefore, implementation of the proposed General Plan would exceed current regional projections for population by 25 percent, housing by 32 percent, and jobs by 18 percent based on these factors alone. However, it is important to note that regional projections used were from *Plan Bay Area 2040* and not the updated *Plan Bay Area 2050*, which does not provide growth projections at the city level to enable comparison to local plans. Housing and job growth as a result of implementation of the proposed General Plan would be within *Plan Bay Area 2050* projections of a 48 percent increase of housing units and 29 percent increase of jobs for San Mateo County.<sup>7</sup> Therefore, the proposed project would not be expected to induce unplanned population growth as a result of housing or job growth.

The Land Use (LU) Element of the proposed General Plan serves as the blueprint for the development of public and private property in the city and sets the foundation for future growth, change, and preservation. The following General Plan 2040 goals, policies, and action would serve to minimize potential adverse impacts related to growth in the city:

- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.
  - **Policy LU 1.2: General Plan 2040 Maximum Development.** The General Plan Update Environmental Impact Report (EIR) assumes the following development projections for the year 2040:
    - 21,410 new dwelling units
    - 4,325,000 square feet of new nonresidential floor area

<sup>7</sup> Association of Bay Area Governments and the Metropolitan Transportation Commission, updated January 2021, *Plan Bay Area 2050, The Final Blueprint: Growth Pattern*, [https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease\\_December2020\\_GrowthPattern\\_Jan2021Update.pdf](https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf), accessed August 2, 2022.



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When approved nonresidential development reaches half of the anticipated development, evaluate the citywide jobs-housing balance.

When approved development within City Limits and unincorporated properties within the Sphere of Influence reaches the maximum number of new residential units and net new nonresidential square feet projected in the General Plan EIR, require that environmental review conducted for any subsequent development project address growth impacts that would occur from development exceeding the General Plan EIR's projections.

- **Action LU 1.10: Review of New Development.** Track actual growth of both new housing units and net new nonresidential floor area annually and review every two to three years. Use this information to monitor nonresidential floor area and housing units in San Mateo and to adjust this General Plan, infrastructure plans, and circulation plans, as necessary, if actual growth is exceeding projections.
- **Goal LU-11:** Cultivate a diverse, thriving, inclusive, and green economy.
  - **Policy LU 11.1: Economic Development.** Prioritize the retention and expansion of existing businesses and attract new businesses that strengthen and diversify the City's economic base.
  - **Policy LU 11.2: Local Employment.** Encourage a diverse mix of uses that provide opportunities for employment of residents of all skill and education levels.
  - **Policy LU 11.5: Jobs to Housing Balance.** Strive to maintain a reasonable balance between income levels, housing types, and housing costs within the city. In future area-wide planning efforts, rather than with individual projects, recognize the importance of matching housing choice and affordability with job generation in the city, through an emphasis on the jobs-housing balance.

Implementation of the proposed project itself would not introduce a substantial number of unplanned population in the EIR Study Area and is instead the overriding policy document that plans for such growth. As determined in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, there are no existing infrastructure deficiencies identified in the EIR Study Area, and no future deficiencies are likely to occur as a result of the proposed project. Further, Chapter 4.12, *Parks and Recreation*, and Chapter 4.14, *Public Services*, of this Draft EIR determines that population growth under the proposed project would not result in a parks, recreation, or public service deficiency. Additionally, all potential future development would be required to provide required site-specific infrastructure improvements and to pay any project-specific impact fees. Therefore, implementation of the proposed project would not induce substantial unplanned population growth and would not necessitate the construction of additional infrastructure, and the impact is *less than significant*.

**Significance without Mitigation:** Less than significant.

## POPULATION AND HOUSING

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POP-2	The proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
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Displacement is typically considered substantial in cases where major development such as a freeway or a large-scale redevelopment would result in the displacement of large amounts of existing housing, such that the construction of replacement housing is necessary.

Buildout under the proposed project is expected to result in an increase of approximately 21,410 housing units in the EIR Study Area over an approximately 20-year horizon. As identified under impact discussion POP-1, approximately 24 percent of the added 21,410 housing units anticipated by 2040 are units already accounted for in the City's development pipeline because they have been approved or are under project review. Potential future development in the city is projected to occur primarily in the ten General Plan Land Use Study Areas, which include areas where current buildings are aging, vacant, or not maintained and areas where property owners have expressed interest in considering redevelopment of the property. Because future development would occur largely through redevelopment activities, it is possible that buildout under the proposed project could displace an unknown number of existing residents or housing.

The Land Use (LU) Element of the proposed General Plan serves as the blueprint for the development of public and private property in the city and sets the foundation for future growth, change, and preservation. In addition to the proposed General Plan goals, policies, and action listed under impact discussion POP-1 that would regulate growth in the city, the following General Plan 2040 goals, policies, and action would serve to minimize potential adverse impacts related to population and housing displacement:

- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.
  - **Policy LU 1.1: Equitable Development.** Prioritize development projects that meet social and economic needs of the economically vulnerable populations to address and reverse the underlying socioeconomic factors in the community that contribute to residential and social segregation in the city. Provide a range of housing types, sizes, and affordability levels in all San Mateo neighborhoods.
  - **Policy LU 1.3: Optimize Development Opportunities.** Encourage new development in major commercial and transit-oriented development areas, including the Downtown, Caltrain station areas, and the El Camino Real corridor, to maximize the density and intensity specified in the Land Use Plan and to efficiently use land and infrastructure resources.
  - **Policy LU 1.4: Mixed-Use.** Encourage mixed-use developments to include increased residential components to provide greater proximity between jobs and housing, promote pedestrian activity, and reduce traffic congestion and vehicle miles traveled (VMT).

## POPULATION AND HOUSING

- **Policy LU 1.5: Surplus Land.** Consider redesignating City-owned land not required for public services, facilities, or infrastructure for development of affordable housing.
- **Policy LU 1.6: Legal Nonconforming Developments.** Allow legally established nonconforming uses and buildings to be maintained, have minor expansions where appropriate, and be reconstructed if destroyed by fire or natural disaster. Encourage reconstruction and/or minor expansions to have a design that is visually compatible with surrounding development and complies with the City's development standards.
- **Goal LU-2:** Balance well-designed development with thoughtful preservation.
  - **Policy LU 2.2: Caltrain Stations and El Camino Real Minimum Densities.** Require new residential development within a half mile of a Caltrain station or within one block of the El Camino Real corridor to meet the minimum density established by the applied land use designation and encourage new development to achieve maximum density.
  - **Policy LU 2.3: Community Benefits.** Develop a framework to allow density/intensity bonuses and concessions in exchange for the provision of community benefits, such as additional affordable housing, increased open space, public plazas or recreational facilities, subsidized retail space for small businesses, subsidized community space for nonprofits that provide community support services or childcare facilities, pedestrian and multimodal safety improvements, and/or off-site infrastructure improvements above minimum requirements.
- **Goal LU-3:** Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.
  - **Policy LU 3.1: Housing Diversity.** Promote safe, attractive, and walkable residential neighborhoods with diverse types and sizes of homes for individuals, families, and households of all income levels.
  - **Policy LU 3.15: Residential Uses to Support Institutions.** Support the development of housing at quasi-public institutions such as schools, churches, and other facilities of an educational, religious, charitable, or philanthropic nature, consistent with the mission of these organizations. Encourage the development of ancillary residential uses when aligned with the organization's mission or to provide housing for employees.
- **Goal LU-8:** Support the equitable health and well-being of all neighborhoods in San Mateo and all members of the San Mateo community by improving conditions in equity priority communities.
  - **Policy LU 8.5: Community Preservation.** Prevent displacement in equity priority communities by protecting tenants, helping homeowners remain in place, and funding affordable housing.
- **Goal LU-11:** Cultivate a diverse, thriving, inclusive, and green economy.
  - **Policy LU 11.5: Jobs to Housing Balance.** Strive to maintain a reasonable balance between income levels, housing types, and housing costs within the city. In future area-wide planning efforts, rather than with individual projects, recognize the importance of matching housing choice and affordability with job generation in the city, through an emphasis on the jobs-housing balance.

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- **Goal LU-13:** Maintain Development Review and Building Permit processes that are comprehensive and efficient.
  - **Policy LU 13.1: Development Review Process.** Review development proposals and building permit applications in an efficient and timely manner while maintaining quality standards in accordance with City codes, policies, and regulations, and in compliance with State requirements.

Future development under the proposed project is anticipated to result in a net increase in density and utilization of infill or underutilized sites in existing urban areas, primarily in the ten General Plan Land Use Study Areas. Therefore, displacement of people or housing would be temporary as redevelopment occurs. While the proposed General Plan 2040 does focus on infill development which may occur as redevelopment, the proposed General Plan does not call for any large-scale development that would be considered to result in substantial displacement of existing housing. The scale of temporary removal of housing would be typical for urban development projects. Further, redevelopment in the EIR Study Area would occur largely on sites that are underutilized and/or with older structures that are past their past their useful life, and small levels of displacement that may occur would be addressed through compliance with proposed goals, policies, and actions. Therefore, any potential displacement of persons in the EIR Study Area would not be substantial, and the impact would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>POP-3</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative population and housing impacts in the area.</b>
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The context for the cumulative population and housing impacts would be potential future development under the proposed project combined with development on lands adjacent to the city. As described under impact discussions POP-1 and POP-2, implementation of the proposed project would not induce a substantial amount of unplanned population growth or growth for which inadequate planning has occurred, or displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The proposed and existing General Plan goals, policies, and actions would provide adequate planning to accommodate the proposed new increase in growth in the EIR Study Area. Therefore, the proposed project would not result in a cumulatively considerable impact to population and housing, and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## POPULATION AND HOUSING

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## 4.14 PUBLIC SERVICES

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential public services impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

This chapter covers the following public services:

- Fire protection
- Police
- Schools
- Libraries

### 4.14.1 FIRE PROTECTION SERVICES

#### 4.14.1.1 ENVIRONMENTAL SETTING

This section describes regulations, resources, facilities, equipment, response times, and budget for fire protection services.

### Regulatory Framework

#### *State Regulations*

##### California Government Code

Section 65302 of the California Government Code requires General Plans to include a Safety Element, which must include an assessment of wildland and urban fire hazards. The Safety and Hazardous Waste Management Element of the existing General Plan 2030 and the Safety Element of the proposed General Plan satisfy this requirement.

##### California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. The Office of the State Fire Marshal supports CAL FIRE's mission to protect life and property through fire prevention engineering programs, law and code enforcement, and education.

##### California Building Code

The State of California provides a minimum standard for all building design except detached one- and two-family residential dwellings and townhouses not more than three stories above grade plane, through Title 24, Part 2, of the California Code of Regulations (CCR), commonly referred to as the



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“California Building Code” (CBC). The CBC incorporates, by adoption, the International Building Code of the International Code Council, with California amendments, and is updated every three years, with supplements published in intervening years. It is adopted by the State, and can be modified on a jurisdiction-by-jurisdiction basis, based on local geologic, climatic, and topographic conditions. The City of San Mateo regularly adopts each new CBC update and modifies it under the San Mateo Municipal Code (SMMC) Chapter 23.08, *Building Code*. Commercial and residential buildings are plan-checked by local City building officials and San Mateo Consolidated Fire Department (SMC Fire) for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in most new buildings, including all high-rise buildings, all residential buildings and other facilities; fire resistant rated construction and construction in designated wildland fire hazard severity zones; fire alarm systems and exiting requirements; and fire safety requirements during construction. The CBC also establishes structural stability, and seismic safety for buildings and structures.

### California Residential Code

The State of California provides a minimum standard for all building design of detached one- and two-family residential dwellings and townhouses not more than three stories above grade plane, through Title 24, Part 2.5, of the CCR, commonly referred to as the “California Residential Code” (CRC). The CRC incorporates, by adoption, the International Residential Code of the International Code Council, with California amendments, and is updated every three years. Like the CBC, it is modified by the City, as needed, to address local conditions.

### California Fire Code

The California Fire Code incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. The California Fire Code is the official fire code for the State of California (State) and all political subdivisions. It is found in CCR Title 24, Part 9, and, like the CBC, it is revised and published every three years by the California Building Standards Commission. Also like the CBC, the California Fire Code is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions.

The California Fire Code is a model code that regulates minimum fire safety regulations for new and existing buildings, facilities, storage, and processes, including emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Typical fire safety requirements include the installation of sprinklers in most new buildings, including all high-rise buildings, all residential buildings, and other facilities; fire resistant rated construction; construction in designated wildland fire hazard severity zones; fire alarm systems and exiting requirements; fire safety requirements during construction; the regulation of hazardous materials not covered by the unified program (described below); and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

### Unified Hazardous Waste and Hazardous Materials Management Program

The routine management of hazardous materials in California is administered under the Unified Hazardous Waste and Hazardous Materials Management Program (Unified Program). San Mateo’s

hazardous materials programs are administered and enforced under the Unified Program. The California Environmental Protection Agency has granted the City's responsibilities to San Mateo County Environmental Health, including implementation and enforcement of hazardous material regulations under the Unified Program as a Certified Unified Program Agency.

#### Mitigation Fee Act (California Government Code 66000-66008)

Assembly Bill (AB) 1600, the Mitigation Fee Act, requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This act became enforceable on January 1, 1989.

#### *Local Regulations*

#### San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to fire protection services are primarily in the Safety Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.14.1.3, *Impact Discussion*.

#### City of San Mateo Municipal Code

The SMMC includes various directives pertaining to fire prevention and protection. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to fire prevention and protection impacts are included in Title 3, *Taxation and Finance*, Title 10, *Peace, Safety and Morals*, and Title 23, *Buildings and Construction*.

- Chapter 3.56, *Transient Occupancy Tax*, Section 3.56.035, *Special Tax*. This section imposes a two percent tax to finance police and fire improvements within the city.
- Chapter 10.16, *Fire Regulations*, outlines certain regulations associated with fire and the fire department. It includes what is prohibited, what to do in a fire zone, and vegetation management requirements.
- Chapter 23.08, *Building Code*, adopts the 2022 CBC as the rules, regulations, and standards within the City as to all matters, except as modified or amended in the SMMC.
- Chapter 23.28, *Fire Code*, adopts the 2016 edition of the CFC as the rules, regulations, and standards within the City as to all matters except as modified or amended in the SMMC. This Fire Code is adopted and enforced by the SMC Fire. As stated in Section 27.56.150, *Fire and Explosive Hazards*, fire and explosive hazards are subject of the fire prevention regulations in Chapter 23.28 of the SMMC.

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### Existing Conditions

San Mateo County is in Region II of the California Fire Service and Rescue Emergency Mutual Aid System, which extends one to two counties inland from the Pacific Coast and from Monterey County to the Oregon border.<sup>1</sup> In the event of a wildfire requiring firefighting resources from outside of San Mateo County, mutual aid is typically first lent from other fire agencies in the affected region.

The City of San Mateo is served by the SMC Fire. The department was formed by the establishment of a Joint Powers Authority and represents the merger of fire departments in the cities of Belmont, Foster City, and San Mateo.<sup>2</sup> The SMC Fire is responsible for protecting lives, property, and the environment from fire and hazardous materials exposure, providing emergency medical care, offering programs that prepare citizens for emergency, and providing non-emergency services, including fire prevention and emergency preparedness.

Out of the nine fire stations that SMC Fire operates, six of the Stations are located within San Mateo: Station 21 at 120 South Ellsworth Avenue; Station 23 at 31 West 27<sup>th</sup> Avenue; Station 24 at 219 South Humboldt Street; Station 25 at 1455 Shafter Street; Station 26 at 1500 Marina Court; and Station 27 at 1801 DeAnza Boulevard. SMC Fire staffs two 100-foot tractor-drawn aerial ladder trucks, one out of Station 21 and the other out of Station 23, that respond to all major incidents in the community.<sup>3</sup>

SMC Fire's Commercial Inspection Program inspects commercial occupancies to ensure fire safety and checks all newly constructed and remodeled buildings for Fire and Building Code compliance. SMC Fire also provides fire investigation services to determine the cause of fires.

The goal for SMC Fire is to respond to 90 percent of all Priority 1 emergency calls in 6 minutes 59 seconds or less.<sup>4</sup> In 2021, SMC Fire met this goal with an average response time of 5 minutes 28 seconds. A majority of incidents were for rescues and emergency medical services.<sup>5</sup>

SMC Fire serves nearly 161,000 residents with a daytime population around 230,000. The department has 154 full-time employees assigned to administration, fire prevention, training, emergency preparedness, fire operations, and emergency medical services.<sup>6</sup> Each fire station has one fire engine staffed by one Fire Captain and two Firefighters/Engineers.<sup>7</sup>

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<sup>1</sup> San Mateo County Sheriff's Office, Homeland Security Division, Office of Emergency Services, May 2015, *County of San Mateo Emergency Operations Plan*, <https://hsd.smcsheriff.com/sites/default/files/downloadables/1%20-%20Emergency%20Operations%20Plan.pdf>, accessed August 2, 2022.

<sup>2</sup> San Mateo Consolidated Fire Department, 2022, History, <https://www.smcfire.org/about-us/history/>, accessed August 5, 2022.

<sup>3</sup> San Mateo Consolidated Fire Department, 2022, Stations & Apparatus, <https://www.smcfire.org/about-us/station-locations/>, accessed August 5, 2022.

<sup>4</sup> San Mateo Consolidated Fire Department, 2022, Field Operations, <https://www.smcfire.org/divisions/field-operations/>, accessed August 5, 2022.

<sup>5</sup> San Mateo Consolidated Fire Department, 2021, *Annual Report: 2021 Edition*, <https://www.smcfire.org/wp-content/uploads/2022/03/Annual-Report-2021.pdf>, accessed August 5, 2022.

<sup>6</sup> City of San Mateo Website, Fire Department, <https://www.cityofsanmateo.org/74/Fire>, accessed August 5, 2022.

<sup>7</sup> San Mateo Consolidated Fire Department, 2022, Stations & Apparatus, <https://www.smcfire.org/about-us/station-locations/>, accessed August 5, 2022.

The 2019 estimated population is 26,808 for Belmont, 33,221 for Foster City, and 108,020 for San Mateo, for a combined total population of 168,049.<sup>8</sup> This results in an average of one firefighter for every 1,091 persons.<sup>9</sup> The standard set by the National Fire Protection Association recommends that there be one firefighter for every 1,000 population.

#### 4.14.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant fire protection services impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.
- In combination with past, present, and reasonably foreseeable projects, result in cumulative fire protection service impacts in the area.

#### 4.14.1.3 IMPACT DISCUSSION

PS-1	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.
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New development in the EIR Study Area would be served by SMC Fire. A significant impact to SMC Fire would result if, in order for SMC Fire to adequately serve the area, increased demand in the EIR Study Area would require the construction of new facilities or the expansion of existing facilities, the construction or operation of which would cause significant environmental impacts.

Development under the proposed project would include new housing and nonresidential development, with associated increases to resident and employee population served by SMC Fire.

The Land Use (LU), Public Services and Facilities (PSF), and Safety (S) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on fire protection service facilities. The following General Plan 2040 goals, policies, and actions would serve to reduce impacts to fire protection service facilities and services:

<sup>8</sup> State of California, Department of Finance, May 2022, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2020*, <https://dof.ca.gov/forecasting/demographics/estimates/estimates-e5-2010-2020/>, accessed August 2, 2022.

<sup>9</sup> 168,049 overall population/154 full time employees = 1,091 persons per firefighter

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- **Goal LU-12:** Create financial stability for the City by maintaining its ability to pay for public improvements, core infrastructure, and essential services.
  - **Policy LU 12.1: Revenue Generators.** Retain and grow existing businesses and attract new businesses that can generate and diversify the City's tax revenue and increase job opportunities to ensure the City has adequate resources for infrastructure improvements and essential City services, such as police, fire, parks, recreation, and libraries.
- **Goal LU-14:** Collaborate and communicate with other public agencies regarding regional issues.
  - **Policy LU 14.1: Interagency Cooperation.** Promote and participate in cooperative planning with other public agencies and the jurisdictions within San Mateo County, such as the 21 Elements regional collaboration, regarding regional issues such as water supply, traffic congestion, rail transportation, wildfire hazards, air pollution, waste management, fire services, emergency medical services, and climate change.
- **Goal PSF-1:** Protect the community's health, safety, and welfare by maintaining adequate police, fire, and life safety protection.
  - **Policy PSF 1.1: Effective Police and Fire Services.** Maintain facilities, equipment, and personnel to provide an effective police force and fire protection to serve existing and future population and employment, as identified in the Land Use Element.
  - **Policy PSF 1.3: Fire Stations.** Coordinate with and support San Mateo Consolidated Fire Department (SMC Fire) to maintain a high level of service by modernizing fire stations, as needed. Provide new stations and improvements to existing stations and training facilities to meet equipment, staffing, and training requirements, as well as Essential Services Building Requirements.
  - **Policy PSF 1.4: Fire Inspections.** Coordinate with and support SMC Fire to maintain fire inspection staffing levels to meet existing needs and the projected 2040 population, employment and development, and inspections mandated by other governmental agencies, consistent with the City's Building Security Code.
  - **Policy PSF 1.5: Maintenance and Replacement.** Coordinate with and support SMC Fire to provide fire apparatus replacement and maintenance programs to achieve a high state of readiness.
  - **Policy PSF 1.6: Emergency Medical Service (EMS) Readiness.** Maintain the highest level of Emergency Medical Service (EMS) readiness and response capabilities possible by encouraging interagency medical drills and exercises where hospital personnel work with emergency responders in the field and with Emergency Operation Centers and by encouraging citizens to become trained in basic medical triage and first aid through the Community Emergency Response Team (CERT).
- **Goal S-1:** Minimize potential damage to life, environment, and property through timely, well-prepared, and well-coordinated emergency preparedness, response plans, and programs.
  - **Policy S 1.1: Emergency Readiness.** Maintain the City's emergency readiness and response capabilities, especially regarding hazardous materials spills, natural gas pipeline ruptures, fire

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hazards, wildland fire risk, earthquakes, pandemics, and flooding. Focus primarily on areas identified by the City as underserved and most vulnerable to loss of life and property due to proximity to hazardous incidences, and work to ensure funding is available to these communities as a key component of emergency readiness.

- **Policy S 1.3: Location of Critical Facilities.** Avoid locating critical facilities, such as hospitals, schools, fire, police, emergency service facilities, and other utility infrastructure, in areas subject to slope failure, wildland fire, flooding, sea level rise, and other hazards, to the extent feasible.
- **Policy S 1.4: Multiple Egress Points.** Require new development to provide at least two points of emergency access (ingress and egress).
- **Policy S 1.6: Emergency Infrastructure and Equipment.** Maintain and fund the City's emergency operations center in a full functional state of readiness. Designate a back-up Emergency Operations Center with communications redundancies.
- **Policy S 1.7: Defensible Design.** Require that new development support effective law enforcement and fire protection by promoting a safe and accessible public realm, including investing in social gathering spaces, enhancing lighting and safety in public spaces through community-led planning, and ensuring adequate property maintenance.
- **Action S 1.18: Automatic and Mutual-Aid Agreements.** Participate in mutual-aid agreements with other local jurisdictions to provide coordinated regional responses, as necessary, to fire, flood, earthquake, critical incidents, and other hazard events in San Mateo and the surrounding area. Work with local jurisdictions to share resources and develop regional plans to implement disaster mitigation and resilience strategies, such as government continuity, emergency operations centers, and communications redundancies.
- **Action S 1.23: Community Training.** Collaborate with SMC Fire to provide emergency preparedness trainings to maintain and expand existing Community Emergency Response Teams (CERTs).
- **Action S 1.24: Emergency Infrastructure and Equipment.** Establish systems to ensure that traffic lights at major intersections, communications and radio infrastructure, and other critical infrastructure continues to function in the event of a localized power outage. Repair any damaged sets of infrastructure or equipment as needed to continue City operations.

In addition to the proposed General Plan goals, policies, and actions listed above, see Chapter 4.18, *Wildfire*, of this Draft EIR, for a complete list of goals, policies, and actions that would minimize risk of wildfire, thereby reducing demand on SMC Fire services.

Future development under the proposed project would be required to comply with CCR Title 24 as outlined in Section 4.14.1.1, *Environmental Setting*. The CFC regulates, among other topics, hazardous material handling, emergency access, and fire protection systems, including automatic sprinkler system, fire extinguishers, and fire alarms. The City reviews plans and conducts construction inspections to ensure that new development complies with existing building and fire code requirements. Compliance with Title 24 and SMC Fire's Fire Prevention Code would ensure any new development proposed in the EIR Study Area meets the most current building and fire codes, thereby increasing safety of the buildings,



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and reducing the likelihood of a fire emergency, subsequently reducing demand on SMC Fire services. In addition, new development is required to pay the City's impact fees that are adopted at the time of future project approval for new residential, retail, office, institutional, and industrial development. As SMC Fire requires new equipment or staffing, the funds for such improvements would be provided through required payment of developer impact fees, the annual budget process, and would rely on the General Fund. Other funding opportunities, such as State and federal grants, may also be available.

While future development under the proposed project would increase demand on fire protection services, growth would occur incrementally. Individual project plan review by SMC Fire, payment of development impact fees, consistency with the proposed General Plan goals, policies, and actions, and compliance with the regulations described under Section 4.14.1.1, *Environmental Setting*, would ensure that SMC Fire is involved as future development is allowed under the proposed project. Furthermore, future construction of new fire stations, or renovation of existing stations, would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed. Compliance with proposed General Plan goals, policies, and actions, existing regulations including payment of development impact fees, and future project-level environmental review would ensure that impacts on fire protection facilities would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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PS-2	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative fire protection service impacts.
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As discussed in Chapter 4, *Environmental Analysis*, of this Draft EIR, the cumulative analysis takes into account growth from development under the proposed project within the city combined with the estimated growth in the service areas of each service provider. In the case of fire protection, this would be the service area of SMC Fire.

Compliance with State and local regulations described under Section 4.14.1.1, *Environmental Setting*, and the proposed General Plan goals, policies, and actions listed in impact discussion PS-1, would ensure that fire protection services continue to adequately serve the EIR Study Area. Likewise, the San Mateo County General Plan has policies that encourage coordination between the county and fire protection agencies in order to identify the most efficient delivery of fire protection services, reduce response times, and have a uniform database and communication system.<sup>10</sup> This type of coordination will provide a coordinated approach to fire protection services and ensure that there is adequate coverage in the EIR Study Area.

Further, because the proposed project is program level, and because potential future development would be required to undergo project review at the time of project application, each potential future

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<sup>10</sup> San Mateo County, November 1986, *General Plan*, <https://www.smcgov.org/media/101521/download?inline=>, accessed on May 31, 2023.

development would be assessed for impacts to fire protection services. With adequate planning in place in both the City Limits and the unincorporated San Mateo County service area, the proposed project would not result in a cumulatively considerable impact to fire protection services and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## 4.14.2 POLICE SERVICES

### 4.14.2.1 ENVIRONMENTAL SETTING

This section describes regulations, resources, facilities, equipment, response times, and budget for police services.

## Regulatory Framework

### *State Regulations*

AB 1600, the Mitigation Fee Act, requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This act became enforceable on January 1, 1989.

### *Local Regulations*

#### San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to police services are primarily in the Safety Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.14.2.3, *Impact Discussion*.

#### City of San Mateo Municipal Code

The SMMC includes various directives pertaining to fire prevention and protection. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to police protection impacts are included in Title 2, *Administration and Personnel*, Title 3, *Taxation and Finance*, and Title 11, *Vehicles and Traffic*.

- Chapter 2.39, *Police Department*, discusses how the police department is structured and the powers each officer has. It also describes the badges and uniforms of police officers and who can issue badges out.
- Chapter 3.56, *Transient Occupancy Tax*, Section 3.56.035, *Special Tax*. This section imposes a two-percent tax to finance specific police and fire facility improvements within the city.

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- Chapter 11.04, *General Provisions*, outlines the duties of the police officer with regards to traffic and parking.

### Existing Conditions

#### *Service*

The San Mateo Police Department (SMPD) serves the City of San Mateo from its station at 200 Franklin Parkway. The SMPD is currently seeking to establish a substation for their Traffic Division; this project would serve to provide greater infrastructure and increase the level of service provided with respect to traffic safety enforcement as well as improve response times.<sup>11</sup>

Other law enforcement services in the area are the California Highway Patrol and the San Mateo County Sheriff's Office.

#### *Staffing*

The SMPD has 176 employees, which includes 116 sworn police officers, serving 108,020 residents of San Mateo.<sup>12</sup> This equates to roughly one officer for every 931 residents.<sup>13</sup> Past studies have shown the national average for a city the size of San Mateo is about 2.0 sworn police officers per 1,000 residents.<sup>14</sup> SMPD is not currently meeting this ratio. SMPD's current officer per resident ratio is 1.07 and has steadily decreased from its peak of 1.26 in the year 2020. The Police Department wishes to operate at a ratio of 1.30 officers per 1,000 residents.<sup>15</sup>

#### *Department Organization*

The SMPD is organized into four bureaus, which are overseen by captains. The Field Operations Service Bureau (FOSB) is responsible for providing the majority of the department's frontline services. FOSB provides around-the-clock uniformed police protection and responds to all requests for police assistance. The Investigations Services Bureau (ISB) conducts major investigations into crimes against persons, property, businesses, and institutions, and is responsible for covert operations directed toward the apprehension of the most serious and career criminals. The Support Services Bureau (SSB) provides support and development along with neighborhood outreach. SSB also conducts recruitment to ensure that candidates reflect the diverse nature of the community, provides business and fiscal management for the department, and coordinates and facilitates all departmental training. The Communications, Records and Technology Services is the final bureau and manages and integrates technology into police

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<sup>11</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

<sup>12</sup> City of San Mateo, *Adopted 2018-20 Business Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/65342/Adopted-2018-20-Business-Plan?bidId=>, accessed August 5, 2022.

<sup>13</sup> 108,020 residents/116 Sworn Officers = 931 residents per officer

<sup>14</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

<sup>15</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

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operations. This is through maintaining a 24-hour emergency dispatch center as well as keeping accurate police records, property and evidence.<sup>16</sup>

### *Call Volume*

SMPD responds to approximately 90,000 incidents each year. On average, 1,300 of those are “Priority 1” calls, where the call requires an immediate response and there is reason to believe that an immediate threat to life exists. For those calls, the response goal is to have the responding officer arrive on scene within 7 minutes of the call being dispatched.<sup>17</sup>

SMPD is currently meeting the established target response time for Priority 1 calls. In Table 4.14-1, *SMPD Calls and Incidents*, the amount of calls and incidents over 8 fiscal years are shown.

**TABLE 4.14-1 SMPD CALLS AND INCIDENTS**

	FY14/15	FY15/16	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22
Calls for Service	58,467	76,506	62,106	65,125	67,606	63,717	58,250	60,183
Officer-Initiated Incidents	25,800	34,429	24,369	28,658	25,807	26,091	23,381	25,139
Total Incidents	84,267	110,935	86,475	93,783	93,413	89,808	81,631	85,322

Note: FY = fiscal year

Source: City of San Mateo Police Department, March 2023.

### 4.14.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant police services impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services.
- In combination with past, present, and reasonably foreseeable projects, result in cumulative police service impacts in the area.

<sup>16</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

<sup>17</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

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### 4.14.2.3 IMPACT DISCUSSION

PS-3	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services.
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Future development under the proposed project would occur in the ten General Plan Land Use Study Areas and predominantly the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development. Such locations are currently served by the SMPD and potential future development or redevelopment in the EIR Study Area is not anticipated to expand SMPD's service area, which could increase response times or disrupt other performance objectives.

Buildout of the proposed project is projected to occur over a 20-year horizon. While an increase in demand for police protection services would be gradual and is in line with incremental population growth, which would occur with or without adoption of the proposed project, the SMPD has identified that its staffing level has decreased since 2020, and an increase in population would result in a need for increased staffing.<sup>18</sup> As previously described, the SMPD staffing ratios of 1.07 sworn officers to 1,000 residents is below the national staffing average of 2.0 sworn personnel per 1,000 residents.<sup>19</sup> Physical expansion of SMPD facilities may be needed to accommodate increases in staffing and maintain response times.

The SMPD has indicated that existing stations would be inadequate to accommodate future needs; due to this, a new police substation or substantial adjustments, expansions, or renovations to the existing police headquarters facility have been identified as needed.<sup>20</sup> SMPD has expressed that it is beginning to initiate plans for a substation for its Traffic Division that will provide greater infrastructure and increase the level of service with respect to traffic safety as well as improve response times.<sup>21</sup>

The SMPD is funded by the City's General Fund, which potential future development would support through the payment of taxes and development fees, among other fees. Future development in San Mateo would be required to pay taxes and development fees, amongst other fees, that would contribute to the General Fund to support the SMPD. Procurement of additional police equipment would occur as needed through the City's annual budgeting process, which financially supports the procurement of needed equipment.

<sup>18</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

<sup>19</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

<sup>20</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

<sup>21</sup> City of San Mateo Police Department, correspondence with PlaceWorks, March 2023.

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The Public Services and Facilities (PSF) and Land Use (LU) Elements contain goals and policies that require local planning and development decisions to consider and mitigate impacts that potential future development could have on public service facilities. In addition to the goals, policies, and actions listed in impact discussion PS-1, the following General Plan 2040 goals and policies would serve to reduce impacts specific to SMPD facilities and services in the EIR Study Area:

- **Goal PSF-1:** Protect the community's health, safety, and welfare by maintaining adequate police, fire, and life safety protection.
  - **Policy PSF 1.2: Police Station.** Provide police station facilities to meet the facility requirements through 2040. Distribute, locate, and design police support facilities (i.e., substations) as needed to maximize effectiveness, use, accessibility for police personnel, and community interaction.
  - **Policy PSF 1.7: Equitable Code Enforcement.** Continue to use code enforcement to equitably enforce the City's property maintenance codes to ensure that all residents, specifically those living in equity priority communities, have safe and sanitary living conditions.

In addition to the proposed General Plan goals, policies, and actions discussed above, future development under the proposed project would be required to comply with City's Building Code (SMMC Chapter 23.08) and pay police protection impact fees and special taxes associated with financing police station capital improvements, as outlined in Section 4.14.2.1, *Environmental Setting*. These measures would pay for some of the costs associated with expanding police services and facilities.

While the proposed project would increase demand on police protection services, growth would occur incrementally. Payment of police protection impact fees and special taxes, consistency with the proposed General Plan goals, policies, and actions and compliance with the regulations described above would ensure that the SMPD is involved as future development is allowed under the proposed project. Though SMPD has indicated that existing stations would be inadequate to accommodate future needs, it has not yet developed any specific plans to construct new facilities. Therefore, it would be speculative to assess the physical effects of those future construction projects and the project's potential contribution to those effects. Pursuant to Section 15145 of the State CEQA Guidelines, if a particular impact is too speculative for evaluation, no further evaluation is required. Future construction of new or renovated police stations would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed to reduce potential environmental impacts. Therefore, impacts on police service facilities would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>PS-4</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative police service impacts in the area.</b>
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Cumulative police service impacts would occur from potential future development in the service areas of SMPD and the San Mateo County Sheriff's Office. The proposed project does not include specific



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development projects, as it serves as a guide for future development in the city. Future development projects are currently and will continue to be assessed for impacts to police protection services.

It is unlikely that approval of the General Plan and certification of the EIR would immediately increase the degree or incidence of need for police protection services because anticipated growth under the proposed project is projected to occur incrementally throughout the approximately 20-year buildout horizon. Additionally, compliance with the proposed General Plan goals, policies, and actions discussed in impact discussion PS-3 would reduce the impact that potential future development could have on the SMPD, the San Mateo County Sheriff Department, and the California Highway Patrol. Additionally, development would occur in ten General Plan Land Use Study Areas on a limited number of parcels and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing residential and residential-serving development and which are covered by existing police services. Therefore, the proposed project would not result in a cumulatively considerable impact to police protection services and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.14.3 SCHOOLS

#### 4.14.3.1 ENVIRONMENTAL SETTING

This section describes regulations, resources, facilities, equipment, response times, and budget for schools.

#### Regulatory Framework

##### *State Regulations*

##### Senate Bill 50

SB 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. In setting the fees, school districts must prepare nexus studies to demonstrate a reasonable connection between new development and the need for school improvements. The fees may only be used to finance the construction or modernization of school facilities. The fee application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and the percentage of moveable classrooms in use.

##### California Government Code, Section 65995 and Education Code Section 17620

SB 50 amended California Government Code Section 65995, which contains limitations on Education Code Section 17620, the statute that authorizes school districts to assess development fees within

school district boundaries. Government Code Section 65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. According to California Government Code Section 65995(3)(h), the payment of statutory fees is “deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization...on the provision of adequate school facilities.” The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

#### Mitigation Fee Act (California Government Code 66000-66008)

AB 1600, the Mitigation Fee Act, requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This act became enforceable on January 1, 1989.

#### *Local Regulations*

#### San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to schools are primarily in the Circulation, Land Use, and Noise Elements. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.14.3.3, *Impact Discussion*.

#### City of San Mateo Municipal Code

The SMMC includes various directives pertaining to schools. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to school impacts are included in Title 26, *Subdivisions*.

- Chapter 26.16, *Public Facility Sites*, outlines when a school will be located in a subdivision site, the developer may be required to sell the school site to the school district under the terms and conditions set forth in the Subdivision Map Act.
- Chapter 26.64, *Dedication of Land for Community Purposes*, details how under the authority of the Subdivision Map Act, the Planning Commission may require a subdivider to build or dedicate land to a school site on their development. Section 26.64.020, *School Sites*, outlines how the Planning Commission requires the subdivider to offer a school site to the elementary school district in the area under the terms and conditions set forth in the Subdivision Map Act.

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### San Mateo-Foster City School District Facilities Master Plan

Adopted by the board of trustees in 2020, the *San Mateo-Foster City School District Facilities Master Plan* aims to assess the current condition of the school district and predict the needs of the district 10 years down the line.<sup>22</sup> The plan also seeks to identify the fiscal requirements to pursue any needs identified. Any fiscal investments that are made will be distributed responsibly in accordance with the student population served.

### Measure L

In 2018, the San Mateo Union High School District investigated the feasibility of pursuing another bond program that would support several capital improvement projects. A potential list of projects was developed and then later updated in 2019. In 2020 the bond measure was placed on the ballot. The \$385 million capital facilities bond measure was passed by the community. Three projects were fast tracked that addressed important district needs and was approved by the Board of Trustees; these included Capuchino High School Athletic Complex, Mills High School Athletic Complex, and Camera Surveillance Systems for security at every school site.

In total, 51 capital facilities projects and a bond issuance schedule were identified through the Measure L bond process. Each project is subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed to reduce potential environmental impacts.

## Existing Conditions

The City of San Mateo is served by two public school districts: the San Mateo-Foster City School District (SMFCSD) and the San Mateo Union High School District (SMUHSD).

### *San Mateo-Foster City School District*

The SMFCSD educates approximately 11,000 students in preschool through eighth grades in 21 schools located in San Mateo and Foster City.<sup>23</sup> With 1,193 staff, SMFCSD has an average of 21:1 pupil to teacher ratio.<sup>24</sup> Out of the 21 schools, 19 are in the EIR Study Area.

### *San Mateo Union High School District*

The SMUHSD serves the communities of San Mateo, Burlingame, Foster City, Hillsborough, Millbrae, and San Bruno. Through six high schools, a Middle College program in conjunction with the College of San

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<sup>22</sup> San Mateo-Foster City School District, July 30, 2020, *Facilities Master Plan for the New Decade*, <https://resources.finalsite.net/images/v1654109583/smfcsdnet/z7knntsfyircqtvg54r/SMFCSDFMPfortheNewDecadeAdopted7-30-2020.pdf>, accessed August 8, 2022.

<sup>23</sup> San Mateo-Foster City School District, Our District, <https://www.smfcsd.net/our-district>, accessed August 5, 2022.

<sup>24</sup> San Mateo Foster City School District, 2022, *Strategic Plan 2022-2027*, <https://resources.finalsite.net/images/v1656264937/smfcsdnet/uyjuqpjyrvj1roqq9frw/SMFCSD-StrategicPlan2022-2027-Overview.pdf>, accessed on May 31, 2023.

Mateo, an alternative/continuation high school, and an Adult School Program, SMUHSD serves approximately 9,000 students.<sup>25</sup> Three of six of the high schools are located in San Mateo. Aragon High School at 900 Alameda de las Pulgas serves approximately 1,730 students.<sup>26</sup> Hillsdale High School at 3115 Del Monte Street is a Title I school with approximately 1,200 students.<sup>27</sup> San Mateo High School at 506 North Delaware Street serves approximately 1,670 students.<sup>28</sup>

### *Funding*

As of July 1, 2012, the San Mateo Union High School District collects school impact fees (also known as developer fees) for the San Mateo/Foster City Elementary School District. No fees are charged for new construction or additions that are under 500 sq feet.<sup>29</sup>

The combined San Mateo Union High School and San Mateo/Foster City Elementary School District school impact fees for the Cities of San Mateo and Foster City are listed below.<sup>30</sup>

- \$4.61 for Residential Construction
- \$0.75 for Commercial Construction
- \$0.04 sq foot for storage

The High School District portion of school impact fees for the cities of Hillsborough, Millbrae, San Bruno and unincorporated Burlingame are listed below.<sup>31</sup>

- \$1.92 sq foot for residential
- \$0.31 sq foot for commercial

## **4.14.3.2 STANDARDS OF SIGNIFICANCE**

The proposed project would result in a significant schools impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered schools, need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.
- In combination with past, present, and reasonably foreseeable projects, result in cumulative school impacts in the area.

<sup>25</sup> San Mateo Union High School District, 2022, General Information, <https://www.smuhsd.org/Domain/55>, accessed August 5, 2022.

<sup>26</sup> Aragon High School, 2022, Our School, <https://www.smuhsd.org/domain/108>, accessed August 5, 2022.

<sup>27</sup> Hillsdale High School, 2022, About Us, <https://www.smuhsd.org/domain/1159>, accessed August 5, 2022.

<sup>28</sup> San Mateo High School, 2021, *2021 School Accountability Report Card*, [https://www.smuhsd.org/cms/lib/CA02206192/Centricity/Domain/803/2021\\_SARC%20SMHS.pdf](https://www.smuhsd.org/cms/lib/CA02206192/Centricity/Domain/803/2021_SARC%20SMHS.pdf), accessed August 5, 2022.

<sup>29</sup> Christina Wudijono, Executive Coordinator to the Associate Superintendent Chief Business Officer, San Mateo Union High School District, June 28, 2023.

<sup>30</sup> Christina Wudijono, Executive Coordinator to the Associate Superintendent Chief Business Officer, San Mateo Union High School District, June 28, 2023.

<sup>31</sup> Christina Wudijono, Executive Coordinator to the Associate Superintendent Chief Business Officer, San Mateo Union High School District, June 28, 2023.

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### 4.14.3.3 IMPACT DISCUSSION

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PS-5	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered schools, need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.
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A significant impact would result if, in order for the school districts to adequately serve the EIR Study Area, increased school enrollment would require the construction of new facilities or the expansion of existing schools, the construction or operation of which would cause significant environmental impacts.

Increased growth under the proposed project would cause an increase of student population over the next 20 years. The projected increase in students across the EIR Study Area would likely be gradual for the duration of the proposed project as more housing units are incrementally added to the EIR Study Area.

In the case of future subdivisions, which tend to generate families with school-aged children, SMMC Section 26.64.020 outlines how the Planning Commission requires the subdivider to offer a school site to the elementary school district in the area under the terms and conditions set forth in the Subdivision Map Act. Any future construction of new schools would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed. Moreover, the Public Services and Facilities (PSF) Element of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider and mitigate impacts that potential future development could have on school service facilities. The following General Plan 2040 goals, policies, and action would serve to reduce impacts to schools and education services:

- **Goal PSF-5:** Maintain and develop public facilities, and ensure they are equitably available to all current and future members of the community.
  - **Policy PSF 5.1: Equitable Facilities.** Ensure that all San Mateo residents and employees have access to well-maintained facilities that meet community service needs. Encourage the development of facilities and services for vulnerable communities, such as children, low-income households, and seniors, in a variety of settings.
  - **Policy PSF 5.7: Incentives for Public Facilities.** Provide incentives to developers to encourage space for public facilities in new development.
- **Goal PSF-6:** Foster the healthy development and education of children of all abilities, incomes, and backgrounds.
  - **Policy PSF 6.1: School Assistance.** Support efforts by the school district to maintain facilities, equipment, and personnel to provide quality public education to students in San Mateo.

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- **Action PSF 6.6: School District Coordination.** Maintain effective, collaborative relationships with all local school districts.

In addition to the mandatory payment of developer impact fees as outlined in Section 4.14.3.1, *Existing Conditions*, for new development pursuant to California Government Code Section 65995, the proposed General Plan goals, policies, and action listed above work to ensure there are adequate school facilities during the buildout horizon of the General Plan. The public school districts that serve the EIR Study Area would continue to collect the development impact fees, which each district has adopted, throughout implementation of the proposed project. Therefore, potential future development would incrementally pay for any needed facility upgrades and expansions, which, pursuant to California Government Code Section 65995, has been deemed sufficient to provide full and complete school facilities mitigation for the impacts from the proposed project, regardless of whether the fees are adequate to fully fund the expansion or construction of needed facilities. While the San Mateo Union High School District does have capital improvements projects outlined and underway, as described through Measure L, these projects were already identified prior to the proposed project.

In addition, as described in impact discussion PS-3, it would be speculative to assess the physical effects of future construction projects and the project's potential contribution to those effects. Future construction of new or renovated school facilities to accommodate growth under the proposed project would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed to reduce potential environmental impacts. Accordingly, with the required payment of developer impact fees for new development pursuant to California Government Code Section 65995 and future environmental review at the project level for any school facility improvements, impacts to the public-school districts that serve the EIR Study Area would be *less than significant*.

**Significance without Mitigation:** Less than significant.

PS-6	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative school impacts in the area.
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This cumulative analysis takes into account growth from development within the service area of the school districts within the EIR Study Area. As described under impact discussion PS-5, the proposed project would contribute to increased population that is served by various school districts.

As described in impact discussion PS-5, through the proposed General Plan goals, policies, and action, the payment of school impact fees, and standard environmental review procedures for future school improvement projects, the proposed project would not result in significant impact to schools. Payment of school fees and project-level review of school projects to identify potential environmental impacts and mitigation measures as needed would similarly reduce potential impacts from cumulative development. Therefore, cumulative impacts related to school facilities would be *less than significant*.

**Significance without Mitigation:** Less than significant.



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### 4.14.4 LIBRARIES

#### 4.14.4.1 ENVIRONMENTAL SETTING

This section describes the regulations and resources relevant to the San Mateo Public Library (SMPL).

#### Regulatory Framework

##### *State Regulations*

AB 1600, the Mitigation Fee Act, requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied. This act became enforceable on January 1, 1989.

##### *Local Regulations*

##### San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to libraries are primarily in the Land Use Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.14.4.3, *Impact Discussion*.

##### Strategic Plan 2018-2023

The *Strategic Plan 2018-2023* for San Mateo Public Libraries will serve as a communication tool and provide guidance on operational decisions.<sup>32</sup> The plan allows public libraries in San Mateo to anticipate and respond to changes while keeping their core values intact. Key topics in this plan include lifelong learning, technology, outreach and marketing, user experience, and supporting and developing staff.

#### Existing Conditions

The San Mateo Public Library (SMPL) is composed of three branches: the Main library at 55 West 3<sup>rd</sup> Avenue, the Hillsdale Library at 205 West Hillsdale Boulevard, and the Marina Library at 1530 Susan Court. SMPL receives approximately 25,000 visitors annually and has a collection of 1,418,219 items with 245,736 print materials. SMPL offers cultural programs organized by community advisory groups, writing workshops, Grab & Go crafts/STEM (science, technology, engineering, and math) kits, reading buddies,

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<sup>32</sup> San Mateo Public Library, 2018, *Strategic Plan 2018-2023*, <https://www.cityofsanmateo.org/DocumentCenter/View/65607/San-Mateo-Public-Library-Strategic-Plan-2018-2023>, accessed August 16, 2022.

science/health seminars. Teen sewing workshops, book discussion, financial education series, and e-book classes. SMPL has a staff of 54 full-time equivalent employees and 504 volunteers.<sup>33</sup>

Currently, the demand for outreach library services is high, but SMPL is around 25 percent understaffed, and the retention rate for staff is low.<sup>34</sup> Some of the branches in the SMPL are also in need of renovations and upgrades.<sup>35</sup>

#### 4.14.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant library impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered libraries, need for new or physically altered libraries, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for libraries.
- In combination with past, present, and reasonably foreseeable projects, result in cumulative library impacts in the area.

#### 4.14.4.3 IMPACT DISCUSSION

PS-7	The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered libraries, need for new or physically altered libraries, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for libraries.
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A significant impact would result if in order for the library system to adequately serve the city, increased demand in the EIR Study Area would require the construction of new facilities or the expansion of existing library facilities, the construction or operation of which would cause significant environmental impacts. New residential and non-residential development would increase the resident and daytime population of San Mateo, increasing utilization of library services. This increased demand for library services could impact library facilities if construction activities for new and expanded facilities would result in adverse environmental impacts.

As discussed in Section 4.14.4.1, *Environmental Setting*, demand for library services and programs is high but the existing library facility lacks adequate space, which inhibits the library's ability to meet the community's library needs.<sup>36</sup> The SMPL has indicated that some existing libraries are over 50 years old

<sup>33</sup> San Mateo Public Library, 2021, *Impact report 2020 – 2021*,  
<https://www.cityofsanmateo.org/DocumentCenter/View/87210/2020-2021-Impact-Report>, accessed August 5, 2022.

<sup>34</sup> James Moore, San Mateo City Librarian, April 2023.

<sup>35</sup> James Moore, San Mateo City Librarian, April 2023.

<sup>36</sup> James Moore, San Mateo City Librarian, April 2023.

## PUBLIC SERVICES

and are in need of upgrades to expand community meeting rooms and relevant technologies that contemporary library users like.<sup>37</sup> At the moment, there are no plans for expansion or relocation of library services.<sup>38</sup> Staffing has also been difficult to retain, and currently SMPL is roughly 25 percent understaffed.<sup>39</sup> When fully staffed, there is good coverage of on-site needs, but there is a high demand for more outreach activities especially in areas of San Mateo that do not have a library; to meet this demand, more staff would be necessary.<sup>40</sup>

Based on the increased projected buildout and population growth of San Mateo by 2040 under the proposed project, the SMPL would likely need to expand to accommodate potential new users. Future construction of new libraries would be subject to separate project-level environmental review pursuant to CEQA, as required, to identify potential environmental impacts and mitigation measures as needed.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals and policies that require local planning and development decisions to consider and mitigate impacts that potential future development could have on libraries. In addition to the proposed General Plan policy listed in impact discussion PS-1 regarding adequate resources for infrastructure improvement and the proposed General Plan goals, policies, and action listed in impact discussion PS-5 pertaining to public facilities, the following General Plan 2040 goal and policies would serve to reduce impacts to libraries and library services:

- **Goal PSF-5:** Maintain and develop public facilities, and ensure they are equitably available to all current and future members of the community.
  - **Policy PSF 5.4: Library Resources and Services.** Continue to maintain a comprehensive collection of resources and services to help the community discover, enjoy, connect, and learn in an ever-changing world. Continue to offer quality library services and programs to a diverse community promoting literacy and lifelong learning. Maintain a materials budget, staffing, and service hours for the City's library system that are adequate to meet the community needs and meet the continuing changes in information technology.
  - **Policy PSF 5.5: Library Facilities.** Maintain capital investment for essential repairs and space-enhancements to meet current and future needs of library patrons and community organizations.

It is expected that new growth under the proposed project would most likely occur incrementally over the next 20 years. The potential need for future library facility expansions would be assessed as development occurs. Adherence to the proposed General Plan goals, policies, and action discussed above would ensure that there is a *less-than-significant* impact relating to the provision of new or physically altered library facilities.

**Significance without Mitigation:** Less than significant.

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<sup>37</sup> James Moore, San Mateo City Librarian, April 2023.

<sup>38</sup> James Moore, San Mateo City Librarian, April 2023.

<sup>39</sup> James Moore, San Mateo City Librarian, April 2023.

<sup>40</sup> James Moore, San Mateo City Librarian, April 2023.

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**PS-8 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative library impacts in the area.**

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The geographic context for the cumulative library impacts would occur from potential future development under the proposed project, combined with impacts of development on lands adjacent to the city.

A significant cumulative environmental impact would result if this cumulative growth would exceed the ability of San Mateo libraries to adequately serve the EIR Study Area, thereby requiring construction of new facilities or modification of existing facilities. As described in impact discussion PS-7, existing facilities are already not meeting the demands of the city and the payment of taxes would ensure adequate library services over the course of the General Plan buildout. Therefore, the proposed project would not result in a cumulatively considerable impact to library services and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## **PUBLIC SERVICES**

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## 4.15 TRANSPORTATION

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential transportation impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project. Transportation data is included as Appendix E, *Transportation Data*, of this Draft EIR.

### 4.15.1 ENVIRONMENTAL SETTING

#### 4.15.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

###### *Federal Highway Administration*

The Federal Highway Administration (FHWA) is the agency of the United States Department of Transportation (USDOT) responsible for the federally funded roadway system, including the interstate highway network and portions of the primary State highway network, such as US Highway 101, State Route (SR-) 92, and SR-84.

###### *Americans with Disabilities Act*

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the US Access Board, an independent federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not been formally adopted, they are widely followed by jurisdictions and agencies nationwide. These guidelines address various issues, including roadway design practices, slope and terrain issues, and pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, public transit, and other components of public rights-of-way.

##### State Regulations

###### *California Complete Streets Act of 2008 (Assembly Bill 1358)*

Originally passed in 2008, California's Complete Streets Act took effect in 2011 and requires local jurisdictions to plan for land use transportation policies that reflect a "complete streets" approach to mobility. "Complete streets" comprises a suite of policies and street design guidelines which provide for the needs of all road users, including pedestrians, bicyclists, transit operators and riders, children, the elderly, and the disabled. From 2011 onward, any local jurisdiction—county or city—that undertakes a



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substantive update of the circulation element of its general plan must consider “complete streets” and incorporate corresponding policies and programs.

### *Senate Bill 743*

On September 27, 2013, Senate Bill (SB) 743 was signed into law.<sup>1</sup> The Legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas (GHG) emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). Additionally, AB 1358, described above, requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users. To further the State’s commitment to the goals of SB 375, AB 32 and AB 1358, SB 743 added Chapter 2.7, *Modernization of Transportation Analysis for Transit-Oriented Infill Projects*, to Division 13 (Section 21099) of the Public Resources Code.

### *California Building Code*

The State of California provides a minimum standard for building design through Title 24, Part 2, of the California Code of Regulations (CCR), commonly referred to as the “California Building Code” (CBC). The CBC is updated every three years. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The City of San Mateo regularly adopts each new CBC update under the San Mateo Municipal Code (SMMC) Chapter 23.08, *Building Code*. The CBC provides fire and emergency equipment access standards for public roadways in Part 9, Appendix D. These standards include specific width, grading, design, and other specifications for roads, which provide access for fire apparatuses; the code also indicates which areas are subject to requirements for such access. The CBC also incorporates by reference the standards of the International Fire Code (IFC). The modification of streets in the City of San Mateo would be subject to these and any modified State standards.

## Regional Regulations

### *Metropolitan Transportation Commission/Association of Bay Area Governments*

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county Bay Area, including San Mateo County. It also functions as the federally mandated metropolitan planning organization (MPO) for the region. It is responsible for regularly updating the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities.

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<sup>1</sup> An act to amend Sections 65088.1 and 65088.4 of the Government Code, and to amend Sections 21181, 21183, 21186, 21187, 21189.1, and 21189.3 of, to add Section 21155.4 to, to add Chapter 2.7 (commencing with Section 21099) to Division 13 of, to add and repeal Section 21168.6.6 of, and to repeal and add Section 21185 of, the Public Resources Code, relating to environmental quality.

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The passage of AB 32 and the associated State commitment to reducing statewide GHG emissions has placed a new emphasis on accommodating new housing production as a condition of securing transportation grant funding. Subsequent to adoption of AB 32, the State adopted SB 375 as the means of achieving regional transportation-related GHG targets. Among the requirements of SB 375 is the creation of a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the RTP must be consistent with one other, including action items and financing decisions. MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission.

The MTC and Association of Bay Area Governments' (ABAG) *Plan Bay Area 2050* is the Bay Area's Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS). *Plan Bay Area 2050* was prepared by MTC in partnership with ABAG, the Bay Area Air Quality Management District (BAAQMD), and the San Francisco Bay Conservation and Development Commission and adopted on October 21, 2021.<sup>2</sup> The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by California Air Resources Board. An overarching goal of *Plan Bay Area 2050* is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle miles traveled and associated greenhouse gas emissions reductions.

The MTC has established its policy on Complete Streets in the Bay Area. The policy states that projects funded all, or in part, with regional funds (e.g., federal, State Transportation Improvement Program, and bridge tolls) must consider the accommodation of bicycle and pedestrian facilities, as described in California Department of Transportation (Caltrans) Deputy Directive 64. These recommendations do not replace locally adopted policies regarding transportation planning, design, and construction. Instead, these recommendations facilitate the accommodation of pedestrians, including wheelchair users, and bicyclists into all projects where bicycle and pedestrian travel is consistent with current adopted regional and local plans.

As part of the implementing framework for *Plan Bay Area*, Priority Development Areas (PDAs) and Transit Priority Areas (TPAs) are identified as areas where concentrated development can have beneficial environmental effects and reduce adverse environmental impacts. As shown on Figure 4-1, *Priority Development Areas and Transit Priority Areas*, in Chapter 4, the EIR Study Area has four PDAs and a TPA. The PDAs include Grand Boulevard Initiative, Downtown, Rail Corridor, and El Camino Real PDAs. The TPA surrounds El Camino Real and the three Caltrain stations (San Mateo, Hayward Park, and Hillsdale) in San Mateo.

<sup>2</sup> Association of Bay Area Governments and the Metropolitan Transportation Commission, October 2021, *Plan Bay Area 2050*, [https://www.planbayarea.org/sites/default/files/documents/Plan\\_Bay\\_Area\\_2050\\_October\\_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed July 29, 2022.

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### City/County Association of Governments of San Mateo County

The City/County Association of Governments (C/CAG) of San Mateo County is responsible for providing countywide transportation planning. In San Mateo County, C/CAG is the Congestion Management Agency tasked with preparing the Congestion Management Plan (CMP) that describes the strategies to address congestion problems and monitoring compliance. C/CAG works cooperatively with MTC, transit agencies, local governments, Caltrans and BAAQMD. The CMP contains Level of Service (LOS) standards for roadway segments and intersections, a capital improvement program, a program for analyzing land use decisions, and a transportation demand management (TDM) program.<sup>3</sup> The CMP roadway system comprises of 53 roadway segments and 16 intersections.

### *San Mateo County Comprehensive Bicycle and Pedestrian Plan*

The 2011 San Mateo County Comprehensive Bicycle and Pedestrian Plan designates Pedestrian Focus Areas and a Countywide Bikeway Network.<sup>4</sup> The plan identifies El Camino Real as the corridor in the County with the highest densities of population and employment, and thus potential pedestrian activity. The Plan notes that the high level of through-movement along this corridor necessitates the need for bicycle and pedestrian improvements. Although biking, walking, and transit percentages in San Mateo County are lower than the averages for the Bay Area, in 2000 the City of San Mateo had the highest percentage of commuters walking to work in San Mateo County, at 2.6 percent.

Priority bicycle and pedestrian projects identified in the City of San Mateo included new separated crossings of US Highway 101 at E. Hillsdale Blvd, Lodi Avenue/Haddon Drive, and an interchange reconstruction at 3<sup>rd</sup> Avenue/4<sup>th</sup> Avenue. Corridor improvements on El Camino Real through Downtown San Mateo were also identified as a priority project.

## Local Regulations

### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to transportation are primarily in the Circulation Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.15.3, *Impact Discussion*.

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<sup>3</sup> City/County Association of Governments of San Mateo County, December 2021, *Congestion Management Program: Final Report*, [https://ccag.ca.gov/wp-content/uploads/2022/01/258-018-San-Mateo-CMP-Report\\_Final.pdf](https://ccag.ca.gov/wp-content/uploads/2022/01/258-018-San-Mateo-CMP-Report_Final.pdf), accessed July 29, 2022.

<sup>4</sup> City/County Association of Governments of San Mateo County, September 2011, *San Mateo County Comprehensive Bicycle and Pedestrian Plan*, [https://ccag.ca.gov/wp-content/uploads/2014/07/CBPP\\_Main-Report\\_\\_Sept2011\\_FINAL.pdf](https://ccag.ca.gov/wp-content/uploads/2014/07/CBPP_Main-Report__Sept2011_FINAL.pdf), accessed July 29, 2022.

## TRANSPORTATION

### *Climate Action Plan*

Adopted in April 2020, the current San Mateo CAP is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.<sup>5</sup> The CAP allows City decision-makers and the community to understand the sources and magnitude of local GHG emissions and identifies a strategy, reduction measures, and implementation actions the City will use to achieve targets consistent with State targets. The CAP, adopted in 2020, updated and expanded the City's goals, measures, and actions to address GHG emissions from the energy, water, transportation, solid waste, and off-road equipment sectors. It also revises San Mateo's implementation program and framework to monitor and report progress. A technical update to the CAP with updated inventories and forecasts has been conducted as part of the proposed project.

### *City of San Mateo Municipal Code*

The SMMC includes various directives pertaining to transportation. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to transportation impacts are included in Title 24, *Transportation System Management (TSM)*, and Title 27, *Zoning*.

- Chapter 24.01, *Transportation System Management*, includes TSM requirements to assure that employers and complexes participate in mitigating traffic problems, encourage coordination and consistency between public agencies and the private sector in planning and implementing transportation programs, encourage alternatives to commuting by single occupancy vehicles, and reduce traffic impacts within the City by reducing the number of automobile trips, daily parking demand, and total VMT.
- Section 27.90.060, *Transportation Demand Management*, requires all planning applications for projects within the San Mateo Rail Corridor Transit Oriented Development (Rail Corridor Plan) area to be consistent with the provisions of Rail Corridor Plan Chapter 7 (G) Transportation Demand Management (TDM), including participation in the Transportation Management Association (TMA). All planning application submittal must include a trip reduction and parking management plan with recommended reduction measures. The requirement pertains to all projects which are estimated to result in a net increase of 100 PM peak hour trips, before implementation of TDM measures.
- Chapter 27.13, *Transportation Improvement Fee*, outlines the types of development and land use categories subject to the fee and how the amount of the fee is determined. Development will pay only for improvements where there is a reasonable relationship between the road improvements and the traffic generated by the new development. Each type of development shall contribute to the needed improvements in proportion to the use of improvements by that type of development.

### *Bicycle Master Plan*

The 2020 City of San Mateo Bicycle Master Plan provides a blueprint for a citywide system of bike lanes, bike routes, bike paths, bicycle parking and other related facilities to allow for safe, efficient, and

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<sup>5</sup> City of San Mateo, April 2020, *2020 Climate Action Plan*, [cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidid=](https://cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidid=), accessed May 25, 2023.

## TRANSPORTATION

convenient bicycle travel within the city and to regional destinations in the Bay Area.<sup>6</sup> The purpose of the plan is to build upon the existing mobility network with infrastructure projects and supporting programs that promote bicycling and use of personal mobility devices as alternatives to driving in San Mateo.

### *Pedestrian Master Plan*

The Citywide Pedestrian Master Plan (PMP) was adopted in 2012 and provides a broad vision, strategies, and actions for improving the pedestrian environment and increasing the number of walking trips in San Mateo.<sup>7</sup> The purpose of the PMP is to prioritize pedestrian improvements through a needs analysis of the city's network to identify gaps in the network and potential improvements. The PMP applies prioritization criteria to the output of the needs assessment to establish rankings for infrastructure improvements as well as programmatic recommendations and includes a list of priority pedestrian infrastructure recommendations for corridors and intersections throughout the city. The PMP also introduced a Greenway Pedestrian Corridor Network, a pedestrian-friendly network of streets that are intended to improve pedestrian connections to neighborhood destinations, transit, and recreational opportunities.

### *Transit Oriented Development (TOD) Pedestrian Access Plan*

The 2022 Transit Oriented Development (TOD) Pedestrian Access Plan provides a roadmap to enhance pedestrian safety and create comfortable walking routes to transit for all ages and abilities. The Plan focuses on improving conditions for pedestrians around the three Caltrain stations and along El Camino Real.

### *Neighborhood Traffic Management Program*

The City of San Mateo adopted its Neighborhood Traffic Management Program (NTMP) in 2006.<sup>8</sup> The NTMP is intended to provide consistent citywide policies for neighborhood traffic management to ensure equitable and effective solutions that enhance the safety and livability of neighborhoods in San Mateo. The document provides instruction for residents in identifying appropriate neighborhood traffic management measures such as driver education, enforcement, and engineering physical improvements that can be utilized in addressing specific neighborhood traffic issues. An important component of the NTMP is to build consensus through neighborhood and stakeholder meetings and resident surveys, as well as trial installations prior to permanent installation of physical improvements.

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<sup>6</sup> City of San Mateo, April 2020, *Bicycle Master Plan*,  
[https://www.cityofsanmateo.org/DocumentCenter/View/85445/2020-Bike-Master-Plan\\_Final\\_Updated-62021?bidId=](https://www.cityofsanmateo.org/DocumentCenter/View/85445/2020-Bike-Master-Plan_Final_Updated-62021?bidId=),  
accessed July 29, 2022.

<sup>7</sup> City of San Mateo, April 2012, *Citywide Pedestrian Master Plan*,  
<https://www.cityofsanmateo.org/DocumentCenter/View/10070/Final-Ped-MP-low-resolution?bidId=>, accessed July 29, 2022.

<sup>8</sup> City of San Mateo, October 2016, *Neighborhood Traffic Management Program*,  
<https://www.cityofsanmateo.org/DocumentCenter/View/1211/Neighborhood-Traffic-Management-Program?bidId=>, accessed  
July 29, 2022.

### *San Mateo Transportation Impact Analysis Guidelines*

The City of San Mateo adopted the Transportation Impact Analysis Guidelines (Guidelines) in July 2020.<sup>9</sup> The Guidelines provide direction on how to conduct VMT assessments per SB 743 and level of service assessments per General Plan polices, but only the VMT assessment is part of the environmental review process that must meet the California Environmental Quality Act (CEQA) requirements. These CEQA requirements are described further in Section 4.15.2, *Standards of Significance*, below. The Guidelines establish the quantitative methodology, significance thresholds (which is 15 percent below average VMT for residential and office projects consistent with the citywide and GHG emission goals), and mitigation measures for any VMT impacts.

While the Guidelines provide a framework to analyze many types of projects, the Guidelines acknowledge that an alternative methodology may be appropriate for unique projects. As stated in the Guidelines, the City retains the authority to exercise its judgment in seeking exemptions or modifying the thresholds of significance, baseline, and methodology for individual projects based on the project-specific context during the review process. Since the Guidelines do not contain a specific threshold applicable to comprehensive planning documents such as a General Plan update, the VMT analysis methodology and thresholds defined in the Guidelines are not suitable for the impact assessment in this EIR. Instead, a threshold of no net increase in per capita or per employee VMT is considered more appropriate for programmatic level areawide redevelopment studies or General Plans, and is applied to estimate the VMT impact in the subsequent sections. (See Section 4.15.2, *Standards of Significance*.)

## 4.15.1.2 EXISTING CONDITIONS

### Roadway System

The roadway system in the City of San Mateo is made up of freeways, arterials, collectors, local streets and alleyways. Each is described in detail below. The proposed classification as part of the proposed project is shown on Figure 4.15-1, *Proposed Street Classification*.

#### *Freeways*

Freeways are high-speed roadways without intersections that allow users to reach destinations outside of the city, either by car or transit. There are two freeways in the City of San Mateo: US Highway 101 and State Route 92 (SR-92). Interstate 280 (I-280) also provides regional access to the community and is located just west of the City's Sphere of Influence.

US Highway 101 is an 8- to 10-lane north-south freeway that traverses the easterly portion of the city. US Highway 101 extends northward through San Francisco and southward through San Jose and is a roadway of regional significance to the intercity circulation within the Bay Area. US Highway 101 provides access to the city via eight interchanges. One of the interchanges is a freeway-to-freeway

<sup>9</sup> City of San Mateo July 2020, *Transportation Impact Analysis Guidelines*, [https://sanmateo.primegov.com/meeting/attachment/3169.pdf?name=Att%201%20-%20Draft%20Transportation%20Impact%20Analysis%20\(TIA\)%20Guidelines](https://sanmateo.primegov.com/meeting/attachment/3169.pdf?name=Att%201%20-%20Draft%20Transportation%20Impact%20Analysis%20(TIA)%20Guidelines), accessed May 26, 2023.



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interchange with SR-92. Two of the interchanges, at 3<sup>rd</sup> Avenue/4<sup>th</sup> Avenue and at Hillsdale Boulevard, are full-access interchanges. The remaining five interchanges are partial access interchanges. Within the City Limits, average daily traffic volumes on US Highway 101 range between 240,000 south of SR-92 and 270,000 north of SR-92. Managed toll lanes were recently added to Highway 101 connecting from Santa Clara County boundary to I-380 in San Mateo County.

SR-92 is a 4- to 6-lane east-west freeway extending from Half Moon Bay in west San Mateo County to Hayward in Alameda County. SR-92 traverses across the San Francisco Bay via a six-lane bridge (San Mateo Bridge), which is one of the seven bridges that cross the San Francisco Bay within the Bay Area. SR-92 provides access to the city via eight interchanges. One of the interchanges is a freeway-to-freeway interchange with US Highway 101. All remaining interchanges are full-access interchanges. Within City Limits, average daily traffic volumes on SR-92 range between 60,000 to 80,000 west of El Camino Real, approximately 100,000 between El Camino Real and US Highway 101, and over 150,000 east of US Highway 101.

### *Arterials*

Arterial streets connect the regional roadway network with collectors. Most intersections along arterials are signalized, often with a coordinated and interconnected signal system. Compared to collectors, arterials have higher capacity to accommodate traffic volumes, and they provide for longer, continuous movement throughout the city. Arterials typically serve between 10,000 to 50,000 vehicles per day. Access to most freeway interchanges within the city are provided by arterials.

El Camino Real (SR-82) is owned by Caltrans and is a four- to six-lane north-south arterial within the city that is of regional significance. El Camino Real extends from Santa Clara County through San Mateo County. Within the City Limits, El Camino Real provides access to the Hillsdale Shopping Center, Downtown San Mateo, the Hillsdale Caltrain Station, and nearby residential neighborhoods. El Camino Real provides direct access to SR-92 via a full interchange.

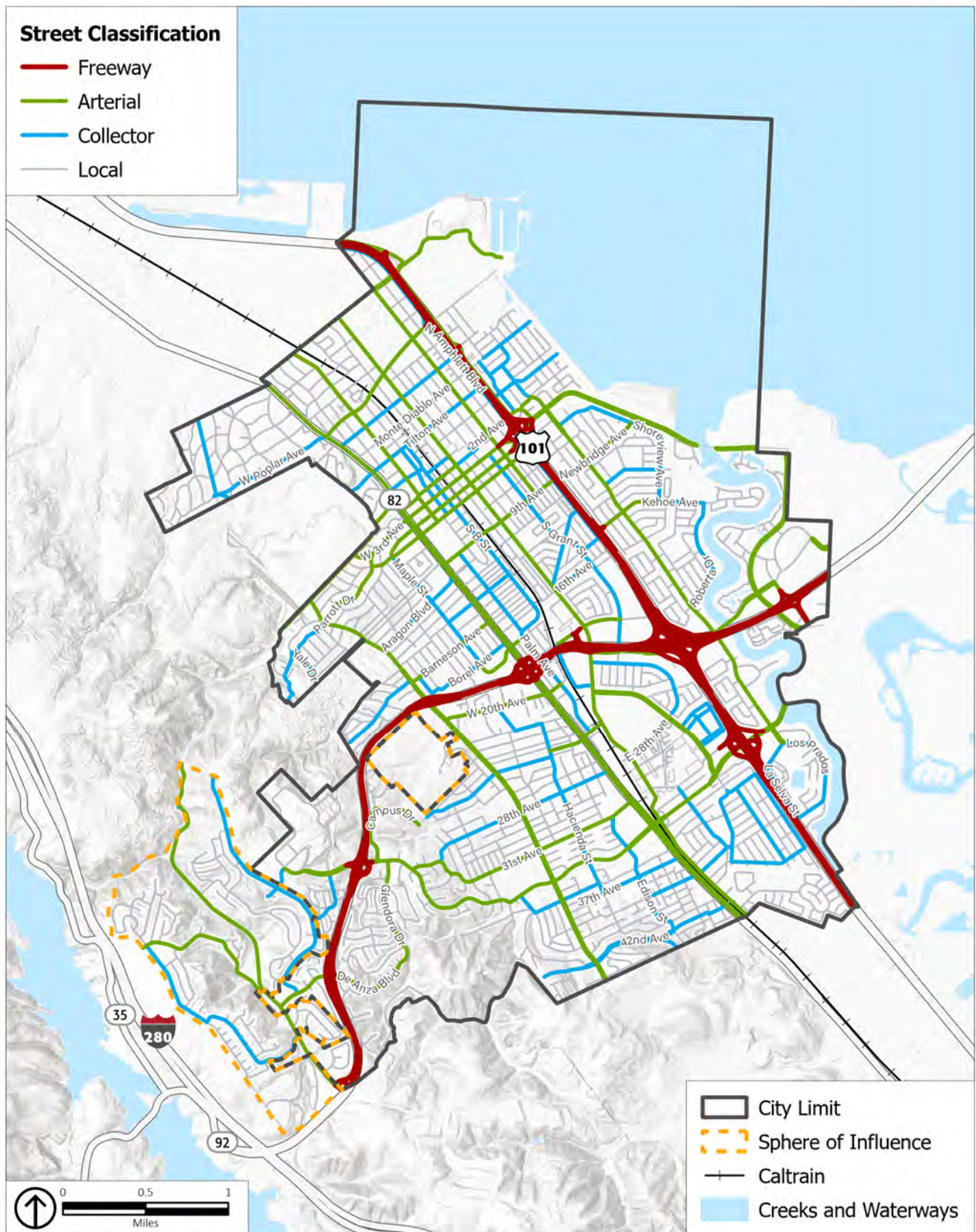
### *Collectors*

Collectors link neighborhoods together and allow travelers to reach places outside of their neighborhoods. They have higher speeds than local streets and can handle more traffic volume. Collectors typically serve between 1,000 and 10,000 vehicles per day. While access to freeway interchanges within the EIR Study Area is mostly provided by arterials, two collector roads (North Bayshore Boulevard, and Kehoe Avenue) provide access to two partial interchanges with US Highway 101.

### *Local Streets and Alleyways*

Local streets and alleyways make up the majority of the roadway system in San Mateo and typically have lower speeds and vehicular traffic volumes.

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Source: Caltrans, 2022; PlaceWorks, 2023.

Figure 4.15-1  
Proposed Street Classification

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### Public Transit

The City of San Mateo has three Caltrain Stations: San Mateo, Hayward Park, and Hillsdale. Caltrain operates through the San Mateo and Hillsdale Caltrain Stations with three types of service: local, limited stop, and express (Baby Bullet). Hayward Park has limited stops and local service only. During peak hours (5:00 to 10:00 a.m. and 4:00 to 9:00 p.m.), Caltrain runs local and limited stop service every 10 to 75 minutes, with an average headway of 28 minutes for Hillsdale, 29 minutes for San Mateo, and 55 minutes for Hayward Park. In the AM peak period, three northbound Baby Bullet trains and two southbound Baby Bullet trains serve Hillsdale Station. The direction of the Baby Bullet trains serving Hillsdale station reverses in the PM peak. San Mateo Station is served by three northbound Baby Bullet trains in the morning peak, with no southbound Baby Bullet service. This reverses in the evening with three southbound Baby Bullet trains serving San Mateo Station. Caltrain allows residents to connect with job centers around the Silicon Valley, as well as San Francisco and San Jose. In addition to Caltrain service, multiple SamTrans bus routes operate within City Limits. These routes fall under three categories: routes connecting to Caltrain stations, routes connecting to Caltrain and BART stations, and school-day only routes. Transit routes are shown in Figure 4.15-2, *Transit Network*.

In addition to regional transportation agency services, several shuttles operate on weekdays in San Mateo that offer last mile connections from Caltrain and caters to commuters and seniors. Shuttles that are open to the public are funded by C/CAG, BAAQMD, the Peninsula Joint Powers Board, MTC, local employers, and City funds. Shuttles operated by private companies are believed to support commuters in and around San Mateo but are not available to the general public.

### Pedestrian Network

The City of San Mateo Department of Public Works oversees the maintenance of 380 miles of sidewalks in San Mateo.<sup>10</sup> In the City of San Mateo, property owners are financially and legally responsible for maintaining the sidewalk fronting their property. Nearly every street in the city has a sidewalk, with some exceptions in residential single-family neighborhoods of San Mateo Park and Sugarloaf, which is a pedestrian-only zone with space for outdoor dining and special events in the public right-of-way.

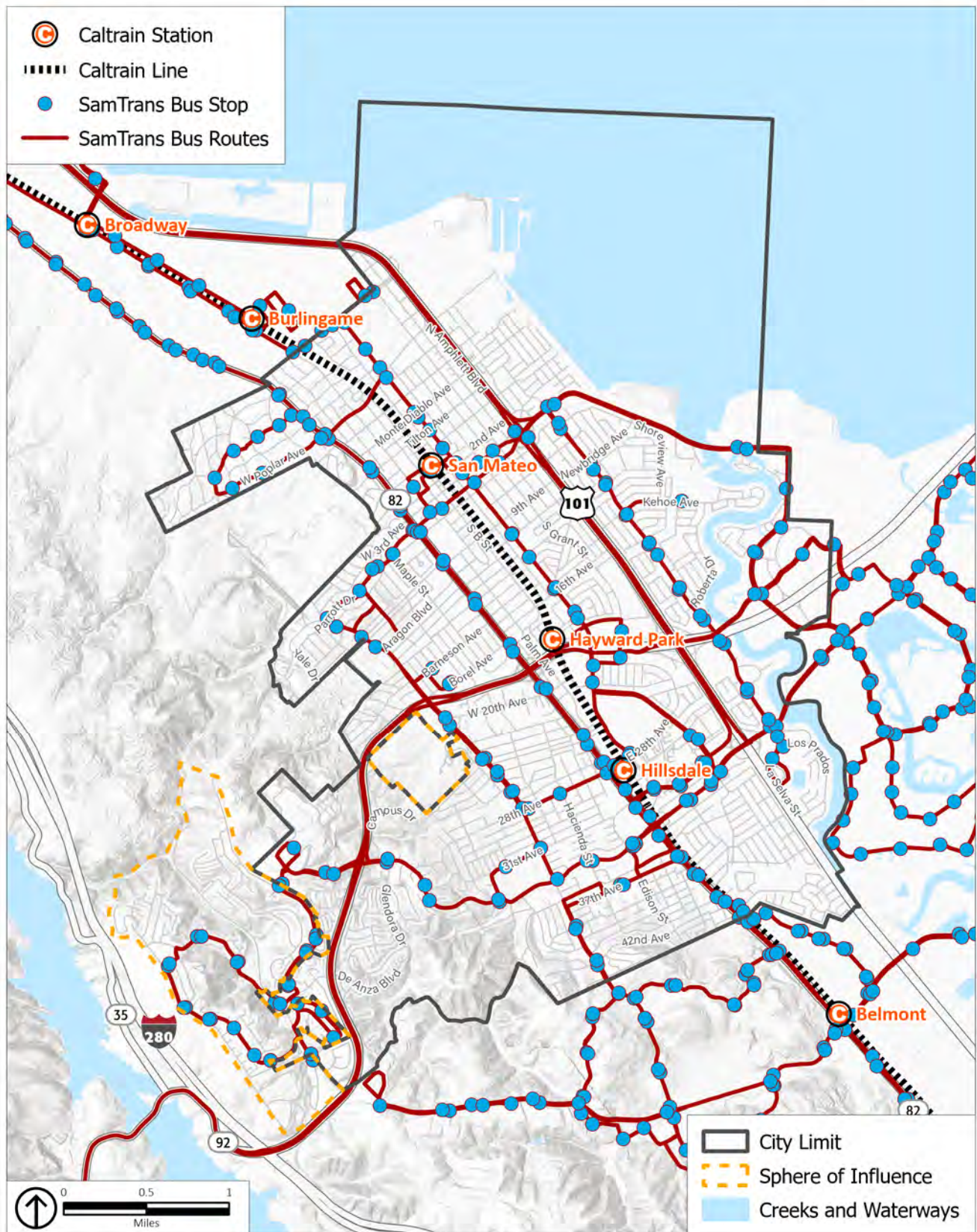
The city's street grid is allows for frequent pedestrian crossings, both controlled and uncontrolled. Controlled crossings are locations with a signal or a stop sign to facilitate pedestrian crossings. San Mateo has implemented additional treatments at crosswalks to help increase visibility of pedestrians at some intersections in its Downtown area and throughout the city. Additionally, high visibility crosswalks are installed at various locations throughout the city where greater amounts of pedestrian activity occur. Leading pedestrian intervals—when the pedestrian signal is timed to give pedestrian a 3- to 7-second head start when entering an intersection before the green light for vehicles—have been implemented in the Downtown to increase pedestrian safety.

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<sup>10</sup> City of San Mateo Website, Sidewalk Repair Program, <https://www.cityofsanmateo.org/2134/Sidewalk-Repair-Program#:~:text=In%202008%2C%20the%20City%20Council,effective%20and%20cost%2Defficient%20way.,> accessed July 29, 2022.



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Source: City of San Mateo, 2023; PlaceWorks, 2023.

Figure 4.15-2  
Transit Network

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Some existing roadway infrastructure can make walking in the city more challenging. For instance, some roadways have a rolled curb instead of a vertical curb, which makes it easier for vehicles to park on and block the sidewalk.

### Bicycle Network

San Mateo has an existing bicycle network with connections to neighboring city bikeway networks. The San Mateo bicycle network contains six classifications of existing and planned bicycle facilities as described herein. The classifications are described in order of the level of separation between bicyclists and motorists. Shared-use paths offer the most separation, while bicycle routes would require bicyclists to ride alongside motorists.

- **Shared-use paths (Class I):** Off-road pathways designed for people walking, biking, and rolling (e.g., skateboard or scooter).
- **Separated bike lanes (Class IV):** A designated lane separated from vehicular traffic by a physical buffer (e.g., flexible posts, planters, parked vehicles, curbs).
- **Buffered bike lanes (Class II):** A designated striped bicycle lane adjacent to vehicular traffic separated by a striped buffer area on the pavement.
- **Standard bike lanes (Class II):** A designated striped bicycle lane directly adjacent to vehicular traffic.
- **Bicycle boulevards (Class III):** Bicyclists share a lane with vehicular traffic and are identified with bicycle signage and pavement markings to increase driver awareness of bicyclists and aid bicyclists with navigation. Bicycle boulevards include traffic-calming treatments and are solely implemented on low-speed (i.e., less than 25 mile per hour) and low-volume (i.e., less than 3,000 vehicles per day) streets to ensure they are low-stress facilities.
- **Bicycle routes (Class III):** Bicyclists share the lane with vehicular traffic and are identified with bicycle signage and pavement markings to increase driver awareness of bicyclists and aid bicyclists with navigation. The City is phasing out this type of facility within the bicycle network and upgrading to other facility types.

### 4.15.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant transportation impact if it would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.
5. In combination with past, present, and reasonably foreseeable projects, result in cumulative transportation impacts in the area.

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As explained previously in Section 4.15.1.1, *Regulatory Framework*, the City of San Mateo TIA Guidelines establish a threshold of 15 percent below average VMT for residential and office projects to be consistent with the citywide and GHG emission goals. While the Guidelines provide a comprehensive framework, it is important to note that all projects are not covered under this framework. The City retains the authority to exercise judgment in seeking exemptions or adjusting requirements for individual projects during the review process. Although the threshold set by the guidelines is suitable for new development projects, it is not appropriate for the analysis of large program documents, such as the General Plan, that encompass existing land uses. Consequently, a threshold of no net increase in per capita or per employee VMT is more appropriate for the General Plan and is applied to estimate the VMT impact in the analysis below.

### 4.15.3 IMPACT DISCUSSION

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<b>TRAN-1</b>	<b>The proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.</b>
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As discussed in Section 4.15.1.1, *Regulatory Framework*, programs, plans, and policies addressing circulation in EIR Study Area include the Complete Streets Act, Plan Bay Area, and the San Mateo County, Comprehensive Bicycle and Pedestrian Plan. In general, the overarching goals of these policy documents are to ensure a safe, efficient, and accessible multi-modal transportation network for all users that also reduces VMT to improve air quality and reduce GHG emissions.

As shown in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, 42 percent of GHG emissions in San Mateo originate from vehicle trips generated by San Mateo residents and businesses (i.e., the transportation sector). The California Air Resources Board recognizes that reducing VMT is a key objective to meeting California's GHG emission-reduction goals. The greatest potential for reducing GHG emissions in San Mateo is to reduce transportation-related emissions through measures that help to reduce vehicular trips and increase use of non-automobile modes of transportation (i.e., transit, bicycle, and pedestrian modes).

#### *Public Transit*

As described in Section 4.15.1.2, *Existing Conditions*, transit services in the EIR Study Area are provided by Caltrain and SamTrans. Future potential development under the proposed project is anticipated to contribute to an increased use of transit in the EIR Study Area due to growth in population and employment.

The Circulation (C) and Land Use (LU) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider impacts to transit facilities and support transit-oriented development. The following General Plan 2040 goals, policies, and action would directly and indirectly result in improving the transit network and support an increase in transit use, thus supporting regional goals to reduce VMT and GHG emissions, as well as support programs, plans, ordinances, or policies addressing the circulation system:



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- **Goal C-1:** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.
  - **Policy C 1.1: Sustainable Transportation.** Reduce greenhouse gas (GHG) emissions from transportation by increasing mode share options for sustainable travel modes, such as walking, bicycling, and public transit.
  - **Policy C 1.2: Complete Streets.** Apply complete streets design standards to future projects in the public right-of-way and on private property. Complete streets are streets designed to facilitate safe, comfortable, and efficient travel for all users regardless of age or ability or whether they are walking, bicycling, taking transit, or driving, and should include landscaping and shade trees as well as green streets stormwater infrastructure to reduce runoff and pollution.
  - **Policy C 1.6: Transit-Oriented Development.** Increase access to transit and sustainable transportation options by encouraging high-density, mixed-use transit-oriented development near the City's Caltrain stations and transit corridors.
  - **Policy C 1.7: Equitable Multimodal Network.** Prioritize new amenities, programs, and multimodal projects, developed based on community input and data analysis, in San Mateo's equity priority communities.
  - **Action C 1.11: Complete Streets Plan.** Complete and implement the Complete Streets Plan to improve the City's circulation network to accommodate the needs of street users of all ages and abilities.
  - **Action C 1.13: El Camino Real Improvements.** Collaborate with Caltrans, SamTrans, and other partners to support accommodating higher-capacity and frequency travel along El Camino Real, Bus Rapid Transit, and other modes of alternative transportation.
  - **Action C 1.14: Transit-Oriented Development Pedestrian Access Plan.** Coordinate with interagency partners and community stakeholders to seek funding opportunities to design, construct, and build the priority projects identified in the Transit-Oriented Development Pedestrian Access Plan.
  - **Action C 1.17: Data-Driven Approach to Project Design and Prioritization.** Inform the prioritization of improvement projects through the consistent collection and analysis of modal activity data that reveals where the highest concentration of pedestrian, bicycle, and transit trips occur, and study routes and places people would like to access but are currently unable to because of limitations in pedestrian, bicycle, and transit infrastructure.
- **Goal C-5:** Make transit a viable transportation option for the community by supporting frequent, reliable, cost-efficient, and connected service.
  - **Policy C 5.1: Increase Transit Ridership.** Support SamTrans and Caltrain in their efforts to increase transit ridership.
  - **Policy C 5.2: Caltrain.** Support Caltrain as a critical transit service in the city and Peninsula.

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- **Policy C 5.3: California High-Speed Rail.** Support and facilitate local and regional efforts to implement High-Speed Rail. Work to provide multimodal connections between San Mateo and planned High-Speed Rail stations.
- **Policy C 5.5: Transit Improvements.** Support implementation of transit improvements by local and regional transit providers.
- **Policy C 5.6: Transit Safety.** Prioritize improvements to increase safety, access, and comfort at transit centers and bus stops in equity priority communities, along commercial corridors, and in dense, mixed-use neighborhoods.
- **Policy C 5.7: Transit Access in New Developments.** Require new development projects to incorporate design elements that facilitate or improve access to public transit.
- **Policy C 5.8: Transit Education.** Educate the public about the benefits of transit use.
- **Action C 5.10: Transit Experience Improvements.** Prioritize installing new transit shelters and benches or other seating and an energy-efficient street lighting program at transit stops in equity priority communities and areas that improve transit access, safety, and experience.
- **Action C 5.11: Shuttle Programs.** Continue to support public shuttle programs connecting to Caltrain stations. Work to expand public awareness and access to shuttles and expand shuttle service. Support the implementation of publicly accessible private shuttles.
- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure; limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.
  - **Policy LU 1.3: Optimize Development Opportunities.** Encourage new development in major commercial and transit-oriented development areas, including the Downtown, Caltrain station areas, and the El Camino Real corridor, to maximize the density and intensity specified in the Land Use Plan and to efficiently use land and infrastructure resources.
- **Goal LU-2:** Balance well-designed development with thoughtful preservation.
  - **Policy LU 2.2: Caltrain Stations and El Camino Real Minimum Densities.** Require new residential development within a half mile of a Caltrain station or within one block of the El Camino Real corridor to meet the minimum density established by the applied land use designation and encourage new development to achieve maximum density.
- **Goal LU-3:** Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.
  - **Policy LU 3.8: Workplaces.** Develop office buildings and business parks to facilitate transit, pedestrian, and bicycle commutes. Provide compact development, mixed uses, and connectivity to transit to reduce vehicle miles traveled (VMT).
- **Goal LU-4:** Maintain downtown San Mateo as the economic, cultural, and social center of the community.

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- **Policy LU 4.1: Downtown Land Uses.** Allow and prioritize a wide range of residential, dining, entertainment, lodging, and other commercial uses downtown, at high intensities and densities, with strong multi-modal connectivity to the San Mateo Caltrain station and other transit.
- **Policy LU 4.2: Quality of Downtown Development.** Promote quality design of all new development that recognizes the regional and historical importance of Downtown San Mateo and strengthens its pedestrian-friendly, historic, and transit-oriented character.
- **Goal LU-5:** Promote residential and mixed land uses along El Camino Real to strengthen its role as both a local and regional corridor.
  - **Action LU 5.3: El Camino Real Corridor Plan.** Prepare a Corridor Plan for El Camino Real that assembles existing planning documents for the corridor into a single comprehensive plan that implements the El Camino Real policies in General Plan 2040.
- **Goal LU-6:** Promote transit-oriented development around the Hillsdale Caltrain station.
  - **Policy LU 6.1: Rail Corridor Transit-Oriented Development Plan (Rail Corridor Plan).** Continue to implement the Rail Corridor Plan to allow, encourage, and provide guidance for the creation of world-class transit-oriented, mixed-use development (TOD) within a half-mile radius of the Hillsdale and Hayward Park Caltrain stations, while maintaining and improving the quality of life for those who already live and work in the area.
  - **Action LU 6.3: Hillsdale Station Area Plan.** Update the Hillsdale Station Area Plan to foster higher-density residential, office and mixed-use, transit-oriented development that connects to neighborhoods to the east and west, improves bicycle and pedestrian circulation to the station, and increases park and open space areas.
- **Goal LU-7:** Support the transition of shopping areas designated for new uses into vibrant districts with a range of housing, shopping, services, and jobs.
  - **Action LU 7.2: Bridgepointe Area Plan.** Update and consolidate the Bridgepointe Master Plan and Mariner's Island Specific Plan into one planning document to guide redevelopment of the Bridgepointe Shopping Center and the surrounding properties into a mixed-use neighborhood that maintains its regional retail component while developing a diverse range of housing types, including affordable housing; new parks and recreational facilities; community gathering places; ample facilities to support transit, bicycling, and walking; and a range of businesses and services. The plan shall include safe access for pedestrians, cyclists, and transit riders from Bridgepointe to the City's transit corridors, such as Caltrain and El Camino Real.

Implementation of these proposed General Plan goals, policies, and actions support plans and programs to increase travel by transit. As the proposed General Plan is the primary planning document for the City of San Mateo and the proposed update is intended to ensure consistency between the General Plan, Zoning Ordinance, and federal and State laws, implementation of the proposed project would not create inconsistencies with any City plans related to transit. The proposed project is generally consistent with and would not obstruct the transit-related goals and policies in Plan Bay Area as it supports transit facilities and transit-oriented development. Implementation of the proposed project would not result in conflicts with adopted policies, plans, or actions or otherwise decrease the performance or safety of transit facilities or services.

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### *Roadway*

The proposed project would contribute to an increased use of roadway facilities in the EIR Study Area. The proposed project is generally consistent with and would not obstruct the transportation-related goals and policies of Plan Bay Area as it continues to encourage a shift away from drive-alone commute vehicle trips, which are a primary contributor to commute GHG emissions and localized transportation impacts.

While growth within the EIR Study Area would contribute to increased use of roadway facilities from automobiles, the Circulation (C) and Land Use (LU) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider impacts to roadway facilities. In addition to the proposed General Plan goals, policies, and actions previously listed, the following General Plan 2040 goals, policies, and actions would also directly and indirectly result in reducing VMT, and thus would support regional goals to reduce VMT and GHG emissions, as well as support programs, plans, ordinances, or policies addressing the circulation system:

- **Goal C-2:** Use transportation demand management (TDM) to reduce the number and length of single-occupancy vehicle trips through policy, zoning strategies, and targeted programs and incentives.
  - **Policy C 2.1: TDM Requirements.** Require new or existing developments that meet specific size, capacity, and/or context conditions to implement TDM strategies.
  - **Action C 2.2: Implement TDM Ordinance.** Develop and implement a citywide TDM ordinance for new developments with tiered trip reduction and VMT reduction targets and monitoring that are consistent with the targets in their relevant area plans. Reduce parking requirements for projects that include TDM measures.
  - **Action C 2.3: Education and Outreach.** Pursue education for developers and employees about programs and strategies to reduce VMT, parking demand, and the resulting benefits.
  - **Action C 2.4: Leverage TDM Partnership Opportunities.** Work with regional partners to identify and fund TDM strategies that can be implemented at new and existing developments.
  - **Action C 2.5: Facilitate TDM Services.** Facilitate the provision of TDM services to employees and residents through development agreements, Transportation Management Associations, and coordination with regional partners.
  - **Action C 2.6: Travel to Schools.** Reduce school-related VMT and support student health by collaborating with private and public partners to increase the number of students walking or bicycling to school through expanded implementation of Safe Routes to School, including educating students and the community about the benefits of walking and bicycling and making physical improvements to streets and neighborhoods that make walking and bicycling safer. Prioritize school travel safety improvements in equity priority communities.
  - **Action C 2.7: New Development Shuttle Services.** Encourage new developments to provide shuttle services as an option to fulfill TDM requirements. Shuttles should serve activity centers, such as the College of San Mateo, Caltrain stations, downtown, the Hillsdale Shopping Center, or

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other areas and should accommodate the needs and schedules of all riders, including service workers.

- **Goal C-6:** Achieve a transportation system that prioritizes user safety, accommodates future growth, reduces VMT per capita, and maintains efficient and safe operations for all modes and all residents.
  - **Policy C 6.1: Roadway Operations.** Maintain acceptable roadway operations for all intersections and all modes within the city.
  - **Policy C 6.2: Circulation Improvement Plan.** Maintain a transportation network that will accommodate future growth, reduce VMT per capita, and equitably implement complete streets.
  - **Policy C 6.3: Local Transportation Analysis.** Require site-specific transportation impact analysis following the City's adopted Transportation Impact Analysis (TIA) Policy for development projects where there may be an adverse condition or effect on the roadway system.
  - **Policy C 6.4: Operations Analysis for Development Projects.** Require new development to determine the need for new or modified circulation improvements, operations, or alignments where developments identify operational deficiencies that were not previously identified in a transportation impact fee study. Require development applicants to prepare an analysis to determine the need for modifications, such as signalization, turn restrictions, roundabouts, etc. Require applicants to fund identified off-site improvements if warranted, as determined by the appropriate transportation analysis, and as approved by City staff.
  - **Policy C 6.5: Neighborhood Traffic.** Implement traffic-calming measures on residential streets to reduce the volume of pass-through traffic and vehicular speeds.
  - **Policy C 6.6: Truck Routes.** Maintain and update the truck route network to use roadways that are adequately designed for truck usage and minimize potential conflicts with other transportation modes.
  - **Action C 6.9: Network Operations Standard.** Evaluate and adopt an operational metric for all roadway users that accounts for the safe, equitable, and efficient roadway access.
  - **Action C 6.10: Prioritization and Timing of Roadway Improvements.** Revise the Capital Improvement Program (CIP) prioritization system to include additional criteria, such as: potential to reduce vehicle miles traveled (VMT) per capita; proximity to high-injury locations identified in the Local Roads Safety Plan; eligibility and availability of grant or other funding source; benefit or harm to equity priority communities; and correlation with the distribution and pace of development, reflecting the degree of need for mitigation.
  - **Action C 6.11: Congestion Management.** Work with neighboring agencies and regional partners, such as the City/County Association of Governments of San Mateo County (C/CAG), to implement traffic management strategies and technologies, such as signal coordination, to manage local traffic congestion.
- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure;

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limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.

- **Policy LU 1.4: Mixed-Use.** Encourage mixed-use developments to include increased residential components to provide greater proximity between jobs and housing, promote pedestrian activity, and reduce traffic congestion and vehicle miles traveled (VMT).

Implementation of these proposed General Plan goals, policies, and actions would support programs to reduce overall vehicle usage and VMT. The proposed project is generally consistent with and would not obstruct the transportation-related goals and policies in *Plan Bay Area 2050* as it continues to encourage a shift away from drive-alone commute vehicle trips, which are a primary contributor to commute GHG emissions and localized transportation impacts. As described in Section 4.16.1.1, *Regulatory Framework*, Plan Bay Area seeks to reduce GHG emissions from transportation sources in the Bay Area.

Implementation of the proposed project would not result in conflicts with adopted policies, plans, or actions or otherwise decrease the performance or safety of roadway facilities or services.

### *Bicycle and Pedestrian Facilities*

Future potential development from implementation of the proposed project would contribute to and increase use of bicycle and pedestrian facilities in the EIR Study Area. As described in Section 4.15.1.1, *Regulatory Setting*, the San Mateo County Comprehensive Bicycle and Pedestrian Plan identifies that the high level of through movement along El Camino Real necessitates the need for bicycle and pedestrian improvements.

While growth within the EIR Study Area would contribute to and increase use of bicycle and pedestrian facilities, the Circulation (C) and Land Use (LU) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider impacts to bicycle and pedestrian circulation and facilities. In addition to the proposed General Plan goals, policies, and actions previously listed, the following General Plan 2040 goals, policies, and actions would also directly and indirectly result in improving the bicycle and pedestrian network and support an increase in bicycle and pedestrian travel, thus supporting regional goals to reduce VMT and GHG emissions, as well as programs, plans, ordinances, or policies addressing the circulation system:

- **Goal C-1:** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.
  - **Policy C 1.4: Prioritize Pedestrian and Bicycle Mobility Needs.** Prioritize local pedestrian and bicycle projects that enhance mobility, connectivity, and safety when designing roadway and intersection improvements.
  - **Policy C 1.5: El Camino Real.** Facilitate efficient travel and pedestrian safety along El Camino Real.
  - **Policy C 1.9: Dedication of Right-of-Way for Transportation Improvements.** Require dedication of needed right-of-way for transportation improvements identified in adopted City plans, including pedestrian facilities, bikeways, and trails.



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- **Goal C-3:** Build and maintain a safe, connected, and equitable pedestrian network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.
  - **Policy C 3.1: Pedestrian Network.** Create and maintain a safe, walkable environment in San Mateo to increase the number of pedestrians. Maintain an updated recommended pedestrian network for implementation. Encourage “superblock” or similar design in certain nodes of the city, such as the downtown, that allows vehicle access at the periphery and limits cut-through vehicles to create pedestrian-focused, car-light spaces.
  - **Policy C 3.2: Pedestrian Enhancements with New Development.** Require new development projects to provide sidewalks and pedestrian ramps and to repair or replace damaged sidewalks, in addition to right-of-way improvements identified in adopted City master plans. Encourage new developments to include pedestrian-oriented design to facilitate pedestrian path of travel.
  - **Policy C 3.3: Right-of-Way Improvements.** Require new developments to construct or contribute to improvements that enhance the pedestrian experience, including human-scale lighting, streetscaping, and accessible sidewalks adjacent to the site.
  - **Action C 3.4: Implement Pedestrian Improvements.** Prioritize implementation of goals, programs, and projects in the City’s adopted plans that improve the comfort, safety, and connectivity of the pedestrian network.
  - **Action C 3.5: Pedestrian Trails and Routes Awareness.** Increase awareness of existing trails and routes by working with outside agencies and developers to promote these amenities to residents. Continue collaborating with the County on development of the trail network.
  - **Action C 3.6: Access for Users of All Ages and Abilities.** Implement the ADA Transition Plan and maintain accessible streets and sidewalks. Use ADA requirements when implementing design standards.
  - **Action C 3.7: Pedestrian Connectivity.** Incorporate design for pedestrian connectivity across intersections in transportation projects to improve visibility at crosswalks for pedestrians and provide safe interaction with other modes. Design improvements should focus on increasing sight lines and removing conflicts at crosswalks.
  - **Action C 3.8: Safe Routes to School.** Fund and implement continuous Safe Routes to School engagement and improvements with San Mateo elementary, middle, and high schools, and provide support to increase number of students walking and bicycling to school.
  - **Action C 3.9: Downtown Pedestrian Mall.** Complete design and fund improvements to fully transition B Street between 1st Street and 3rd Street into a pedestrian mall.
- **Goal C-4:** Build and maintain a safe, connected, and equitable bicycle and micromobility network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.
  - **Policy C 4.1: Bicycle Network.** Create and maintain a bicycle-friendly environment in San Mateo and increase the number of people who choose to bicycle.

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- **Policy C 4.2: Bicycle Master Plan.** Maintain an updated recommended bicycle network for implementation in the adopted Bicycle Master Plan and related City plans.
- **Policy C 4.3: First- and Last-Mile Connections.** Encourage and facilitate provision of bicycle parking and shared mobility options at transit centers and other community destinations to provide first- and last-mile connections.
- **Policy C 4.4: Bicycle-Related Technology.** Explore ways to use technology to improve bicycle safety and connectivity.
- **Policy C 4.5: Bicycle and Shared Mobility-Related Technology.** Explore ways to use technology to improve bicycle and shared mobility safety and connectivity.
- **Policy C 4.6: Bicycle Improvements.** Require new developments to construct or contribute to improvements that enhance the cyclist experience, including bicycle lanes.
- **Policy C 4.7: Coordination with Other City Projects.** Maximize opportunities to implement bicycle facilities through other City of San Mateo projects.
- **Policy C 4.8: Interjurisdiction Coordination.** Continue to coordinate with adjacent jurisdictions and regional partners in the development of connected bicycle and pedestrian facilities and regional trails, as identified in adopted City plans.
- **Action C 4.9: Bicycle Master Plan Implementation.** Implement the Bicycle Master Plan's recommended programs and projects to create and maintain a fully connected, safe, and logical bikeway network and coordinate with the countywide system. Update the Bicycle Master Plan and related adopted City plans to reflect future bicycle and micromobility facility needs to support the City's circulation network.
- **Action C 4.10: Paving Coordination.** Coordinate and fund the implementation of bicycle facilities and pedestrian improvements identified in the Bicycle and Pedestrian Master Plans with the City's paving program.
- **Action C 4.11: Connectivity Across Freeway Barriers.** Conduct feasibility studies and design alternatives for overcrossings and undercrossings at US Highway 101 and State Route 92 to facilitate connectivity across major barriers.
- **Action C 4.12: Bay Trail.** Identify State and County programs to maintain safe pedestrian and bicycle access to and extension of the San Francisco Bay Trail through coordination with neighboring jurisdictions.
- **Action C 4.13: Crystal Springs.** Pursue safe pedestrian and bicycle access to San Francisco Water District lands via Crystal Springs Road through coordination with the Town of Hillsborough and with State and County assistance.
- **Action C 4.14: Bicycle Detection Devices.** Install signal modifications on existing and planned bikeways to detect bicyclists and micromobility users' presence at intersections and facilitate their safe movement through the intersection.
- **Action C 4.15: Increased Bicycle Capacity on Caltrain and SamTrans.** Coordinate with Caltrain and SamTrans to support/increase bicycle capacity on transit vehicles and to provide an

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adequate supply of secure covered bicycle and micromobility parking at Caltrain stations, transit centers, and major bus stops.

- **Goal LU-2:** Balance well-designed development with thoughtful preservation.
  - **Policy LU 2.3: Community Benefits.** Develop a framework to allow density/intensity bonuses and concessions in exchange for the provision of community benefits, such as additional affordable housing, increased open space, public plazas or recreational facilities, subsidized retail space for small businesses, subsidized community space for nonprofits that provide community support services or childcare facilities, pedestrian and multimodal safety improvements, and/or off-site infrastructure improvements above minimum requirements.
- **Goal LU-4:** Maintain downtown San Mateo as the economic, cultural, and social center of the community.
  - **Action LU 4.4: Downtown Area Plan.** Update the Downtown Area Plan to support and strengthen the Downtown as a vibrant and active commercial, cultural, and community gathering district. The updated Downtown Area Plan shall align with the General Plan, integrate recommendations from other concurrent City efforts, focus growth and intensity in proximity to the Caltrain station, encourage superblock concepts or approaches and allow parklets, update parking standards and parking management strategies, allow for increased housing units and density, and support high-quality, pedestrian-oriented design and architecture.
- **Goal LU-8:** Support the equitable health and well-being of all neighborhoods in San Mateo and all members of the San Mateo community by improving conditions in equity priority communities.
  - **Policy LU-8.7: Access to Parks and Recreation.** Provide attractive, comfortable, and safe pedestrian and cyclist access to public parks and recreational facilities in and near equity priority communities.

Implementation of these goals, policies, and actions of the proposed General Plan would improve the bicycle and pedestrian network and support programs to increase bicycle and pedestrian travel. Implementation of the proposed project would not result in conflicts with adopted policies, plans, or actions or otherwise decrease the performance or safety of bicycle or pedestrian facilities.

### Summary

In summary, the proposed project supports public transit, improvements to bicycle and pedestrian facilities, and it would promote and direct the City to expand the pedestrian and bicycle network; close gaps in the transportation network; and coordinate with regional agencies to improve the transit network. The proposed project supports the regulatory programs that address the circulation system in the EIR Study Area. As such, the proposed project is consistent with the existing adopted policies, plans, and programs regarding public transit, bicycle, or pedestrian facilities and consequently reducing VMT and GHG emissions, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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**TRAN-2                      The proposed project would not conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b).**

CEQA Guidelines Section 15064.3(b) states that a land use project would have a less-than-significant impact if the VMT generated by the project is within the established VMT thresholds set by the agency. VMT can be measured in different ways: as total VMT; or as an efficiency metric, such as VMT per capita, VMT per employee, and VMT per service population on a typical day. Total VMT represents the overall VMT generated within the city, while VMT per capita or VMT per employee, is an efficiency metric, that quantifies the amount of VMT generated per person who lives and/or works in the city on an average day. VMT per capita is used to evaluate residential projects, VMT per employee for office projects, and VMT per service population for a combination of land uses. For this analysis, VMT per capita and VMT per employee are utilized to assess the impacts of the proposed project. The impact is considered significant if the project results in a net increase in either VMT per capita or VMT per employee. The guidance from both the Governor's Office of Planning and Research (OPR) and the City's Transportation Impact Analysis guidelines allow City staff to modify thresholds depending on the project's characteristics. Therefore, adopting the "no net increase" threshold aligns with the guidance from both OPR and City's TIA guidelines.

Based on this threshold, a significant impact would occur if a proposed residential project's VMT per capita is higher than the existing San Mateo County Baseline, which equates to an impact threshold of 16.4 VMT per capita. For office use, a significant impact occurs if VMT per employee is higher than the existing San Mateo County Baseline, which is 17.3 VMT per employee.

A summary of the VMT analysis based on the City of San Mateo travel demand model is shown in Table 4.15-2, *VMT Analysis*. Table 4.15-2 provides changes in VMT per capita and per employee related to implementation of the proposed project as compared to 2020 baseline conditions (VMT thresholds of significance). The VMT metrics are evaluated for the total of all land uses in the EIR Study Area. VMT metrics reflect minor updates to the City VMT/TIA Guidelines based on new 2020 baseline modeling.

**TABLE 4.15-2      VMT ANALYSIS**

Scenario	VMT per Capita	Significant Impact?	VMT per Employee	Significant Impact?
2020 San Mateo County Baseline	16.4		17.3	
2020 Existing Conditions	16.0		16.4	
Proposed General Plan 2040 Cumulative Conditions	14.6	No	15.3	No

Note: The San Mateo County 2020 Baseline is used as a threshold of significance.  
Source: Kittelson & Associates, Inc., 2023.

As shown in Table 4.15-2, future VMT per capita and VMT per employee in the City of San Mateo under the proposed project are expected to decrease in comparison to existing conditions. For cumulative 2040 conditions, VMT per capita would decrease by approximately 8.8 percent, from 16.0 to 14.6, while VMT per employee would decrease by approximately 7.2 percent, from 16.4 to 15.3. The anticipated changes in VMT from the current conditions to the projected 2040 conditions indicate that future development, especially mixed-use projects, can be successful in reducing VMT by increasing access to job

## TRANSPORTATION

opportunities and essential services within shorter distances. As a result of the reduced distances, there will be a decrease in VMT per capita. Moreover, these shorter trips would also reduce VMT by promoting the use of alternative modes of transportation such as bicycling and walking.

The Circulation (C) Element of the proposed General Plan provides guidance to help design a sustainable and comprehensive transportation system that is safe and accessible for all users and modes of travel. The proposed General Plan goal, policies, and actions listed in impact discussion TRANS-1 would also serve to minimize potential adverse impacts related to VMT. These goals, policies, and actions also promote alternative modes of transportation, such as public transit, bicycling, and walking, encouraging more individuals to choose non-auto modes of transportation and thereby decreasing their reliance on private vehicles.

The implementation of the proposed General Plan goals, policies, and actions would support VMT reduction, and result in reducing VMT per capita and VMT per employee within the proposed project. Additionally, new development within the San Mateo Rail Corridor Transit Oriented Development (Rail Corridor Plan) area would be mandated to include TDM measures in their planning applications. These TDM measures aim to mitigate the VMT generated by the project. Currently, the extent of vehicle trip reduction achieved through the implementation of the City's existing TDM requirements cannot be precisely quantified at the program level. As a result, the VMT estimates provided for the proposed project are considered to be conservative (i.e., represent a "worst case scenario"), as they do not account for potential reduction in VMT resulting from the incorporation of TDM measures.

The buildout of the proposed project is anticipated to generate VMT below the City's established impact thresholds. As shown in Table 4.15-2, under the proposed project, the VMT per capita is estimated to be 14.6, which is below the established threshold for VMT per capita of 16.4. Similarly, the VMT per employee is calculated as 15.3, which is below the impact threshold of 17.3. Therefore, the VMT per capita and VMT per employee would constitute a *less-than-significant* impact.

**Significance without Mitigation:** Less than significant.

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TRAN-3	The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
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While adoption of the proposed project would not directly result in any physical development projects or construction activities, the proposed General Plan recommends various transportation and green infrastructure improvements. They would facilitate movement throughout the city and accommodate existing and proposed local development. This analysis does not currently include an evaluation of such improvements. However, these improvements would be evaluated prior to design, installation and implementation. The evaluation of the transportation and green infrastructure improvements would include conflicts, hazards, or incompatible uses and would be subject to meeting the relevant federal, State, and local City design standards.

## TRANSPORTATION

The Circulation (C) Element of the proposed General Plan provides guidance to help design a sustainable and comprehensive transportation system that is safe and accessible for all users and modes of travel. In addition to the proposed General Plan goals, actions, and policies listed in impact discussion TRANS-1, the following General Plan 2040 goals, policies, and action would support the design of a transportation system that is safe for all modes of travel:

- **Goal C-1:** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.
  - **Policy C 1.3: Vision Zero.** Use a safe systems approach for transportation planning, street design, operations, emergency response, and maintenance that proactively identifies opportunities to improve safety where conflicts between users exist to eliminate traffic fatalities and serious injuries in our roadways.
  - **Action C 1.18: Safety Education.** Pursue safety education to increase awareness for all street users.
- **Goal C-5:** Make transit a viable transportation option for the community by supporting frequent, reliable, cost-efficient, and connected service.
  - **Policy C 5.4: Safety at At-Grade Rail Crossings.** Eliminate existing at-grade rail crossings to improve safety and local multimodal circulation.

Implementation of these proposed General Plan goals, policies, and actions would promote the design of improvements to the transportation network that are safe for all modes of travel. Compliance with State regulations on roadway and facility design, materials, and signage would further minimize the potential for impact. Implementation of the proposed project would not substantially increase hazards due to a design feature or incompatible uses that may have a significant impact on the environment, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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TRAN-4	The proposed project would not result in inadequate emergency access.
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The implementation of the proposed project would include modifications to the existing transportation network that could potentially impact emergency access response times. These modifications, along with land use changes under the proposed project, could result in increased vehicle delays at intersections as well as along roadway segments. Although the proposed project VMT per capita and per employee reduces compared to existing conditions, the proposed project would increase total VMT overall, as described in impact discussion TRAN-2; therefore, the increased delays at intersections could result in an increase in emergency response times. However, future development under the proposed project would be subject to the requirements contained in the City's development codes, which include requirements for emergency access, and would be reviewed by public safety officials for compliance with applicable safety, fire, and building codes as part of the City's entitlement process.



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The Circulation (C), Land Use (LU), Public Services and Facilities (PSF), and Safety (S) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider impacts to emergency access. In addition to the proposed General Plan goals, actions, and policies listed in impact discussion TRANS-1, the following General Plan 2040 goals, policies, and action would serve to minimize impacts to emergency access:

- **Goal C-6:** Achieve a transportation system that prioritizes user safety, accommodates future growth, reduces VMT per capita, and maintains efficient and safe operations for all modes and all residents.
  - **Policy C 6.8: Emergency Signal Preemption.** Require new and upgraded signals to include preemption for emergency vehicles to maintain and enhance emergency response times.
- **Goal LU-14:** Collaborate and communicate with other public agencies regarding regional issues.
  - **Policy LU 14.1: Inter-Agency Cooperation.** Promote and participate in cooperative planning with other public agencies and the jurisdictions within San Mateo County, such as the 21 Elements regional collaboration, regarding regional issues such as water supply, traffic congestion, rail transportation, wildfire hazards, air pollution, waste management, fire services, emergency medical services, and climate change.
- **Goal PSF-1:** Protect the community's health, safety, and welfare by maintaining adequate police, fire, and life safety protection.
  - **Policy PSF 1.6: Emergency Medical Service (EMS) Readiness.** Maintain the highest level of Emergency Medical Service (EMS) readiness and response capabilities possible by encouraging interagency medical drills and exercises where hospital personnel work with emergency responders in the field and with Emergency Operation Centers and by encouraging citizens to become trained in basic medical triage and first aid through the Community Emergency Response Team (CERT).
- **Goal S-1:** Minimize potential damage to life, environment, and property through timely, well-prepared, and well-coordinated emergency preparedness, response plans, and programs.
  - **Policy S 1.4: Multiple Egress Points.** Require new development to provide at least two points of emergency access (ingress and egress).
  - **Policy S 1.8: Response Times.** When reviewing and analyzing roadway improvements, consider how emergency response times can be maintained and improved without reducing roadway user safety.
  - **Policy S 1.11: Evacuation Education.** Include information about safe and effective evacuation as part of natural disaster awareness, prevention, and community education and training efforts. Share information about how to prepare for evacuations, potential evacuation routes and shelter locations, how to receive notifications, and other relevant topics.
  - **Action S 1.16: Evacuation Routes.** Maintain adequate evacuation routes as identified by arterial streets shown in the Circulation Element, Figure C-3 [of the proposed General Plan]. Evaluate each evacuation route's feasibility using a range of hazard criteria. Update this map on a regular basis to reflect changing conditions and State requirements for evacuation routes.

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- **Action S 1.22: Public Safety Outreach.** Develop a public safety education program to increase public awareness of potential hazards, City's emergency readiness and response program, and evacuation routes. Target public education programs to segments of the community that are most vulnerable to hazards and safety risks.
- **Action S 1.24: Emergency Infrastructure and Equipment.** Establish systems to ensure that traffic lights at major intersections, communications and radio infrastructure, and other critical infrastructure continues to function in the event of a localized power outage. Repair any damaged sets of infrastructure or equipment as needed to continue City operations.
- **Action S 1.26: Response Time Study.** Conduct a Response Time Study to provide a data-driven understanding of how future roadway safety improvements could impact emergency response times and use this information to adjust proposed roadway improvements as needed.
- **Action S 1.27: Emergency Notification System.** Develop an emergency notification system (e.g., SMC Alert and Nixle) for flood-prone neighborhoods and businesses before, during, and after a climate hazard event, to assist with evacuation and other support activities. This includes coordination with the San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline) on its early flood warning notification system.

Additionally, emergency vehicles are able to use vehicle preemption technology (where possible) and sirens to reduce their response times, and they would continue to do so regardless of any roadway capacity modification. Locations that would experience a reduction in vehicular roadway capacity would undergo individual operations analyses to assess the potential impacts to emergency vehicle access, and mitigation measures would be developed as needed to reduce potentially significant impacts.

Implementation of the proposed General Plan goals, policies, and actions identified would address emergency access by considering access routes, developing and updating emergency response plans, and incorporating emergency access considerations in the design of future street improvements. Implementation of the proposed project would not result in inadequate emergency access and impacts would be *less than significant*. For an additional discussion of potential impacts related to emergency response and evacuation, please also see impact discussion WILD-1 in Chapter 4.18, *Wildfire*, of this Draft EIR.

**Significance without Mitigation:** Less than significant.

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TRAN-5	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative transportation impacts in the area.
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The impact evaluation described in impact discussions TRANS-1 through TRANS-4 includes discussion on cumulative transportation impacts in the City of San Mateo due to the proposed General Plan. In addition to the proposed General Plan goals, actions, and policies previously listed, the following General Plan 2040 goal and policy would help mitigate cumulative transportation impacts:

## TRANSPORTATION

- **Goal C-1:** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.
  - **Policy C 1.8: New Development Fair Share.** Require new developments to pay a transportation impact fee to mitigate cumulative transportation impacts.

Implementation of the proposed General Plan would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The proposed project would result in a VMT per capita of 14.6, which is below the threshold of 16.4, and a VMT per employee of 15.3, which is below the threshold of 17.3. Therefore, the VMT generated by both the residential and employment development associated with the proposed project would constitute a cumulatively less-than-significant impact. The proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses, nor would it result in inadequate emergency access. Therefore, compliance with the proposed General Plan goals, actions, and policies listed throughout this chapter would ensure that the proposed project would result in *less-than-significant* cumulative transportation impacts.

**Significance without Mitigation:** Less than significant

## TRIBAL CULTURAL RESOURCES

### 4.16 TRIBAL CULTURAL RESOURCES

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential tribal cultural resources impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

#### 4.16.1 ENVIRONMENTAL SETTING

##### 4.16.1.1 REGULATORY FRAMEWORK

###### Federal Regulations

###### *Archaeological Resources Protection Act*

The Archaeological Resources Protection Act (United States Code, Title 16, Sections 470aa–mm) became law on October 31, 1979, and has been amended four times. It regulates the protection of archaeological resources and sites that are on federal and Indian lands.

###### *Native American Graves Protection and Repatriation Act*

Native American Graves Protection and Repatriation Act (NAGPRA), Title 25, United States Code (1990), defines “cultural items,” “sacred objects,” and “objects of cultural patrimony;” establishes an ownership hierarchy; provides for review; allows excavation of human remains, stipulates return of the remains according to ownership; sets penalties for violations; calls for inventories; and provides for return of specified cultural items.

###### State Regulations

###### *California Public Resources Code*

Archaeological resources are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. Cultural resources are recognized as a nonrenewable resource and therefore receive protection under the California Public Resources Code (PRC) and CEQA.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission (NAHC); require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

## TRIBAL CULTURAL RESOURCES

### *California Health and Safety Code*

The discovery of human remains is regulated by California Health and Safety Code Section 7050.5, which 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...until the coroner...has determined...that the remains are not subject to...provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible.... The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and...has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.<sup>1</sup>*

### *California Senate Bill 18*

California Government Code Section 65352.3-5, formerly known as Senate Bill (SB) 18, states that prior to the adoption or amendment of a city or county's general plan, or specific plans, the city or county shall consult with California Native American tribes that are on the contact list maintained by the NAHC. The intent of this legislation is to preserve or mitigate impacts on places, features, and objects, as defined in PRC 5097.9 and PRC 5097.993, that are within the city or county's jurisdiction. The bill also states that the city or county shall protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects identified by Native American consultation. Government Code 65362.3-5 applies to all general and specific plans and amendments proposed after March 1, 2005.

### *Assembly Bill 52*

Assembly Bill (AB) 52, the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. Projects subject to AB 52 are those that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration on or after July 1, 2016. AB 52 adds tribal cultural resources to the specific cultural resources protected under CEQA. Under AB 52, a tribal cultural resource is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register or included in a local register of historical resources. A Native American Tribe or the lead agency, supported by substantial evidence, may choose at its discretion to treat a resource as a tribal cultural resource. AB 52 also

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<sup>1</sup> California Health and Safety Code, Division 7, *Dead Bodies*, Part 1, *General Provisions*, Chapter 2, *General Provisions*, Section 7050.5(b), [https://leginfo.ca.gov/faces/codes\\_displayText.xhtml?lawCode=HSC&division=7.&title=&part=1.&chapter=2.&article=](https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=7.&title=&part=1.&chapter=2.&article=) accessed August 18, 2022.

## TRIBAL CULTURAL RESOURCES

mandates lead agencies to consult with tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

### *Government Code Section 65092*

When there is a public hearing, a notice will be sent 10 days in advance to any Native American tribes who are on the contact list and filed a written request for notice. The contact list is maintained by the Native American Heritage Commission.

### 4.16.1.2 EXISTING CONDITIONS

San Mateo was initially the home of the Ohlone Indians. The Ramaytush Ohlone population numbered about 2,000 prior to the arrival of the Spanish in 1769.<sup>2</sup> They lived in approximately ten tribes, and villages were organized around watersheds where there was a great abundance of resources. It is known that the Ohlone congregated near San Mateo Creek and the Bay Marshes.<sup>3</sup>

A sacred lands file search conducted by the NAHC for the project area did not identify any sacred lands. The NAHC identified eight local Native American representatives from the following six tribes as potentially having local knowledge:

- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Costanoan Rumsen Carmel Tribe
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- The Ohlone Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band

The City notified all eight tribal representatives about the proposed project on April 22, 2022, and asked for information about potential resources at or near the project site. A consultant group, Kanyon Consulting, LLC, on behalf of the Indian Canyon Mutsun Band of Costanoan Ohlone People responded, requesting consultation and providing recommendations for development project specific mitigation and monitoring measures. The representative also recommended having a Native American Monitor and an Archaeologist be present on-site at all times during any/all ground disturbing activities, conducting a Cultural Sensitivity Training at the beginning of each project, and approaches to promoting indigenous cultural awareness/history. On acknowledgement of receipt and offer to discuss any further comments or questions from the City, there was no further communications from the representative. No responses were received from the other tribes.

### 4.16.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant tribal cultural resources impact if it would:

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<sup>2</sup> County of San Mateo, The Ramaytush Ohlone, The First People to Call the Peninsula Home, <https://www.arcgis.com/apps/Cascade/index.html?appid=ff1475b14956474989181b48dbadd487>, accessed July 29, 2022.

<sup>3</sup> City of San Mateo, amended April 2011. *2030 General Plan, Conservation and Open Space Element*.



## TRIBAL CULTURAL RESOURCES

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, 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 that is: Listed or eligible for listing in the California Register of Historical Resources, or in 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.
2. In combination with past, present, and reasonably foreseeable projects, result in cumulative tribal cultural resources impacts in the area.

### 4.16.3 IMPACT DISCUSSION

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TCR-1	<b>The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource.</b>
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As previously described in Section 4.16.1.1, *Regulatory Framework*, a tribal cultural resource is defined under AB 52 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register or included in a local register of historical resources, or if the City of San Mateo, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a tribal cultural resource.<sup>4</sup>

Impacts from potential future development in the EIR Study Area could impact unknown archaeological resources, including Native American artifacts and human remains. As discussed above under Section 4.16.1.2, *Existing Conditions*, the sacred lands file search conducted by the NAHC for the project area did not identify any sacred lands. The Indian Canyon Mutsun Band of Costanoan was the only tribe to respond to the City's request for information about potential resources at or near the project site and wished to initiate consultation. The tribe also recommended having a Native American Monitor and an Archaeologist be present on-site at all times during any/all ground disturbing activities, conducting a Cultural Sensitivity Training at the beginning of each project, and approaches to promoting indigenous cultural awareness/history.

The Community Design and Historic Resources (CD) Element of the proposed General Plan provides guidance for the development and physical form of San Mateo and includes actions to help preserve the City's historic resources as well as tribal cultural resources. The following General Plan 2040 goal, policies, and action would serve to minimize potential adverse impacts on tribal cultural resources:

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<sup>4</sup> Public Resources Code Sections 21074(a)(1) and (2).

## TRIBAL CULTURAL RESOURCES

- **Goal CD-4:** Protect archaeological and paleontological resources and resources that are culturally significant to Native American tribes and acknowledge San Mateo's past as indigenous land. Encourage development projects to recognize historical tribal lands.
  - **Policy CD 4.1: Archaeological Resources Protection.** Preserve, to the maximum extent feasible, archaeological sites with significant cultural, historical, or sociological merit for present-day residents or Native American tribes.
  - **Policy CD 4.2: Tribal Cultural Resources.** Preserve areas that have identifiable and important tribal cultural resources and comply with appropriate State and federal standards to evaluate and mitigate impacts to cultural resources, including tribal, historic, archaeological, and paleontological resources.
  - **Policy CD 4.3: Tribal Consultation.** Consult with Native American representatives, including through early coordination, to identify locations of importance to Native Americans, including archaeological sites, sacred sites, traditional cultural properties, and other types of tribal cultural resources. Respect tribal concerns if a tribe has a religious prohibition against revealing information about specific practices or locations.
  - **Policy CD 4.4: Potential Archaeological Impacts.** Consistent with the California Environmental Quality Act (CEQA), prior to construction, consult the California Archaeological Inventory Northwest Information Center for project-specific reviews to evaluate the potential for impact on archaeological resources and determine whether or not further study is warranted.
  - **Policy CD 4.5: On-Site Mitigation.** If development could affect a tribal cultural resource or archaeological resource, require the developer to contact an appropriate tribal representative to train construction workers on appropriate avoidance and minimization measures, requirements for confidentiality and culturally appropriate treatment, other applicable regulations, and consequences of violating State laws and regulations.
  - **Action CD 4.7: Preconstruction Investigations.** Consistent with CEQA, establish specific procedures for preconstruction investigation of high- and medium-sensitivity sites identified in the 1983 Chavez investigation, unless superseded by more recent investigations, to assist property owners, developers, and the City in making decisions when archaeological resources may be affected.
  - **Action CD 4.8: Archaeological Sensitivity Data.** Update and maintain the City's data on areas with high archaeological sensitivity.

Compliance with existing federal, State, and local laws and regulations, and the proposed General Plan goal, policies, and actions listed above, would protect unrecorded tribal cultural resources in the EIR Study Area by providing for the early detection of potential conflicts between development and resource protection, and by preventing or minimizing the material impairment of the ability of archaeological deposits to convey their significance through excavation or preservation. Impacts would therefore be *less than significant*.

**Significance without Mitigation:** Less than significant.

## TRIBAL CULTURAL RESOURCES

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TCR-2	The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in cumulative tribal cultural resources impacts in the area.
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Cumulative impacts to tribal cultural resources occur when a series of actions leads to adverse effects on local Native American tribes or tribal lands. No tribal cultural resources have been identified in the EIR Study Area. Further, in association with CEQA review, future AB 52 consultations with Native American tribes to identify tribal cultural resources would be required for projects that have the potential to cause significant impacts to tribal cultural resources.

As discussed in Chapter 4.4, *Cultural Resources*, of this Draft EIR, the proposed project would comply with federal and State laws protecting cultural resources. Compliance with existing federal, State, and local laws and regulations, and the proposed General Plan goals, policies, and actions would ensure that tribal cultural resources, if discovered on future development project sites, are protected and handled appropriately. Therefore, cumulative impacts to tribal cultural resources would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## UTILITIES AND SERVICE SYSTEMS

### 4.17 UTILITIES AND SERVICE SYSTEMS

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. This includes impacts on utilities and service systems, including water supply and demand, wastewater (sewage) conveyance and treatment, solid waste collection and disposal systems, storm drainage systems, and other utilities. In each section of this chapter, a summary of the relevant regulatory framework and existing conditions is followed by a discussion of project impacts and cumulative impacts from implementation of the proposed project.

#### 4.17.1 WATER

The EIR Study Area is served primarily by two water providers: California Water Service Mid-Peninsula District (Cal Water-MPS) and Estero Municipal Improvement District (EMID). Cal Water-MPS provides water service for most of the EIR Study Area, while EMID provides water to the Mariners Island portion of San Mateo. There are two small areas within the EIR Study Area at the end of West Poplar Avenue (approximately 15 acres) and at the end of Parrot Drive (approximately 7 acres) that are provided with potable water by the Town of Hillsborough. However, because these areas are already developed with residential properties and are not areas where future net new growth is anticipated with implementation of the proposed project, the analysis provided below focuses on Cal Water-MPS and EMID.

##### 4.17.1.1 ENVIRONMENTAL SETTING

#### Regulatory Framework

##### *Federal Regulations*

##### Safe Drinking Water Act

The Safe Drinking Water Act, the principal federal law intended to ensure safe drinking water to the public, was enacted in 1974 and has been amended several times. The Safe Drinking Water Act authorizes the United States Environmental Protection Agency (USEPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and human-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Water Resources Control Board (SWRCB) Division of Drinking Water regulates public drinking water systems. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

##### America's Water Infrastructure Act of 2018

America's Water Infrastructure Act was signed into law on October 23, 2018, and authorizes federal funding for water infrastructure projects; expands water storage capabilities; assists local communities in

## UTILITIES AND SERVICE SYSTEMS

complying with the Safe Drinking Water Act and Clean Water Act (CWA); reduces flooding risks for rural, western, and coastal communities; and addresses significant water infrastructure needs in tribal communities.<sup>1</sup> Additionally, the act requires that drinking water systems that serve more than 3,300 people develop or update risk assessments and emergency response plans. Risk assessments and emergency response plans must be certified by the USEPA within the deadline specified by the act.

### *State Regulations*

#### Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.) was passed in 1969 and amended in 2013. It is the basic water quality control law for California. Under this act, the SWRCB has authority over State water rights and water quality policy. The act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB), to oversee water quality on a day-to-day basis at the local and regional levels. RWQCBs engage in various water quality functions in their respective regions and regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. San Mateo is overseen by the San Francisco Bay RWQCB (Region 2).

#### Urban Water Management Planning Act (Senate Bills 610 and 221)

The California Urban Water Management Planning Act and Section 10620 of the Water Code require that all urban water suppliers in California that provide water to more than 3,000 customers or supply more than 3,000 acre-feet per year (AFY)<sup>2</sup> to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. The act is intended to support efficient use of urban water supplies. It requires the UWMP to compare water supply and demand over the next 20 years for normal years, single dry years, and multiple dry years and to determine current and potential recycled water uses.

Senate Bill (SB) 610 and SB 221 were enacted to 1) ensure better coordination between local water supply and land use decisions and 2) confirm that there is an adequate water supply for new development. The following projects that are subject to the California Environmental Quality Act (CEQA) are required at a minimum to prepare a Water Supply Assessment (WSA):

- Residential developments consisting of more than 500 dwelling units.
- Shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- Commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- Hotel or motel, or both, having more than 500 rooms.

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<sup>1</sup> John Barasso, 2018, Congress Passes America's Water Infrastructure Act, <https://www.barrasso.senate.gov/public/index.cfm/2018/10/congress-passes-america-s-water-infrastructure-act>, accessed May 16, 2023.

<sup>2</sup> One acre-foot is the amount of water required to cover one acre of ground (43,560 square feet) to a depth of one foot.

## UTILITIES AND SERVICE SYSTEMS

- Industrial, manufacturing, or processing plant or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- Mixed-use project that includes one or more of the projects specified above.
- Project that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units.

SB 221 requires written verification that there is sufficient water supply available for new residential subdivisions that include over 500 dwelling units. The verification must be provided before commencement of construction for the project.

### Sustainable Groundwater Management Act of 2014

On September 16, 2014, a three-bill legislative package was signed into law collectively known as the Sustainable Groundwater Management Act (SGMA). The Governor's signing message states "a central feature of these bills is the recognition that groundwater management in California is best accomplished locally." Under the roadmap laid out by the legislation, local and regional authorities in medium and high priority groundwater basins must form groundwater sustainability agencies (GSAs) that oversee the preparation and implementation of groundwater sustainability plans (GSPs).

Most of the City of San Mateo is within the San Mateo Plain Subbasin of the Santa Clara Valley Groundwater Basin.<sup>3</sup> The southwestern portion of the City in the hills is not within a designated groundwater basin. The San Mateo Plain Subbasin is designated as a very low priority basin and therefore is not regulated under SGMA. This is because there is very little groundwater use in this basin (less than 2,700 acre-feet/year) and it is mostly due to private well pumping in the subbasin areas south of the City (Redwood City and Menlo Park).

### Water Conservation Act of 2009 (Senate Bill X7 7)

New mandatory requirements for increasing water use efficiency, per State law (SB-X7 7), mandate the reduction of per capita water use and agricultural water use throughout the State by 20 percent by 2020. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for State water grants or loans. SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards. Demonstration of compliance with this regulation is a required component of each water provider's 2020 UWMP. Both Cal Water MPS and EMID are in compliance with their target reductions.

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<sup>3</sup> San Mateo County, 2023, San Mateo County GIS Open Data, San Mateo Plain Subbasin. <https://data-smcmaps.opendata.arcgis.com/datasets/san-mateo-plain-subbasin/explore?location=37.529784%2C-122.220423%2C11.96> accessed on April 6, 2023.



## UTILITIES AND SERVICE SYSTEMS

### 2018 Water Conservation Legislation

In 2018, the California Legislature enacted two policy bills (SB 606 and Assembly Bill 1668) to establish long-term improvements in water conservation and drought planning to adapt to climate change and longer and more intense droughts in California.<sup>4</sup> The Department of Water Resources and the SWRCB will develop new standards for:

- Indoor residential water use
- Outdoor residential water use
- Commercial, industrial, and institutional water use for landscape irrigation with dedicated meters
- Water loss

Urban water suppliers are required to stay within annual water budgets based on their standards for their service areas, and to calculate and report their urban water use objectives in an annual water use report. Based on recent legislation (SB 1157), the California Water Code defines a 55-gallon-per-person daily standard for indoor residential use until 2025, at which time it decreases to 47 gallons, and further decreases to 42 gallons by 2030.

The legislation also includes changes to UWMP preparation requirements. These changes include additional requirements for Water Shortage Contingency Plans (WSCPs), expansion of dry year supply reliability assessments to a five-year drought period, establishment of annual drought risk assessment procedures and reporting, and new conservation targets referred to “annual water use objectives,” which require retailers to continue to reduce water use beyond the 2020 SB X7-7 targets.

### Water Conservation in Landscaping Act of 2006

The Water Conservation in Landscaping Act (AB 1881) required the Department of Water Resources (DWR) to update the State of California’s Model Water Efficient Landscape Ordinance (MWELo). Under AB 1881, cities and counties are required to adopt the State’s MWELo or to adopt a different ordinance that is at least as effective in conserving water as the State’s MWELo.<sup>5</sup>

The MWELo was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and to build resiliency for future droughts. The 2015 revisions to the MWELo increased water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture and by limiting the portion of landscapes that can be covered in turf. Each city and county is required to submit annual reports to DWR that document how the agency is achieving compliance with the State MWELo and how many projects were subject to the ordinance during the annual reporting period.

The City has adopted a WELO that is more stringent than the State’s MWELo and is specified in San Mateo Municipal Code (SMMC) Chapter 23.72, *Water Conservation in Landscaping*. The City requires completion

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<sup>4</sup> California Department of Water Resources, 2021, 2018 Water Conservation Legislation, <https://water.ca.gov/Programs/Water-Use-And-Efficiency/2018-Water-Conservation-Legislation>, accessed May 16, 2023.

<sup>5</sup> California Legislative Information, 2006, Assembly Bill No. 1881, [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=200520060AB1881](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=200520060AB1881), accessed May 16, 2023.

## UTILITIES AND SERVICE SYSTEMS

of a water efficient landscape application for any new construction with 500 square feet or more of landscape, or rehabilitated landscape of 1,000 square feet or more that requires a building permit, plan check, or design review. Along with the application, the developer must include a water efficient landscape worksheet with water budget calculations, a soil management plan, landscape design plan, and irrigation design plan. The City's Building Division reviews all landscape plans to verify compliance with the code requirements.

### California Building Code: CALGreen

The California Building Standards Commission adopted the nation's first green building standards in July 2008, the California Green Building Standards Code, also known as CALGreen. CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure in California. The code establishes planning and design standards for sustainable site development, including water efficiency and water conservation measures that typically reduce water consumption by 20 percent. CALGreen is updated every three years to allow for consideration and possible incorporation of new low flow plumbing fixtures and water efficient appliances. The mandatory provisions of CALGreen became effective January 1, 2011, and the latest version, the 2022 California Green Building Standards Code, became effective on January 1, 2023.<sup>6</sup> The building efficiency standards are enforced through the local building permit process. The City has regularly adopted each new CALGreen update under SMMC, Chapter 23.70, *Green Building Code*.

### California Plumbing Code

The latest version of the California Plumbing Code was issued in 2022 and became effective as of January 1, 2023. is updated on a three-year cycle. It specifies technical standards for the design, materials, workmanship, and maintenance of plumbing systems. One of the purposes of the plumbing code is to prevent conflicting plumbing codes within local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. The City adopts the California Plumbing Code under SMMC Chapter 23.16, *Plumbing Code*.

### California Water Code

The California Water Code states that the water resources of the State must be put to beneficial use and that waste or unreasonable use of water should be prevented. The code is divided into several sections that include provisions regarding water quality, formation of irrigation districts and water districts, safe drinking water, and water supply and infrastructure improvements.

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<sup>6</sup> Department of General Services, 2021, CalGreen, <https://www.dgs.ca.gov/BSC/CALGreen#codes>, accessed May 17, 2023.

## UTILITIES AND SERVICE SYSTEMS

### Mandatory Water Conservation

Following the declaration of a state of emergency on July 15, 2014, due to drought conditions, the SWRCB adopted Resolution No. 2014-0038 for emergency regulation of Statewide water conservation efforts.<sup>7</sup> These regulations, which went into effect on August 1, 2014, were intended to reduce outdoor urban water use and persuade all California households to voluntarily reduce their water consumption by 20 percent. Water companies with 3,000 or more service connections were required to report monthly water consumption to the SWRCB. The SWRCB readopted the regulations several times, most recently requiring local water agencies to implement Level 2 drought contingency plans. In March 2023, Governor Newsom announced the lifting of some of the drought restrictions following a wet winter, including the Level 2 demand reduction actions.

However, there are portions of the water conservation emergency regulations that remain in effect. These include wasteful water use practices that are still in effect include: 1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; 2) the washing of vehicles without an automatic shut-off nozzle; 3) the application of potable water to driveways and sidewalks; 4) the use of potable water in nonrecirculating ornamental fountains; and 5) the application of potable water to outdoor landscapes during and within 48 hours after at least 0.25 inch of rainfall. In addition, watering decorative grass in commercial, industrial, and institutional areas, including common areas of homeowners' associations (HOAs) is currently prohibited but this restriction may be lifted in the future. Urban water suppliers are still required to submit monthly water monitoring reports to the SWRCB.

### *Regional Regulations*

#### Cal Water-Mid-Peninsula District: Urban Water Management Plan (UWMP)

Cal Water-MPS serves the Cities of San Carlos and San Mateo and adjacent unincorporated areas of San Mateo County, including The Highlands and Palomar Park. Cal Water-MPS adopted its current 2020 UWMP in June 2021 in compliance with the Urban Water Management Planning Act, the Water Conservation Act of 2009, and Sections 10610 to 10656 of the California Water Code.<sup>8</sup> All urban water suppliers are required to prepare, adopt, and file a UWMP with DWR every five years.

The Water Conservation Act of 2009, also known as SBX7-7, requires that urban water suppliers reduce per capita water use by 20 percent by 2020. As reported in the UWMP, CWS-MPS met this goal in 2020 with a per capita water demand of 95 gallons per capita per day (gpcd) as compared to the target goal of 124 gpcd.<sup>9</sup>

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<sup>7</sup> Water Resources Control Board, 2014, Resolution No. 2014-0038, [https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2014/rs2014\\_0038\\_regs.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2014/rs2014_0038_regs.pdf), accessed May 17, 2023.

<sup>8</sup> California Water Service, June 2021, *2020 Urban Water Management Plan, Mid-Peninsula District*, [https://www.calwater.com/docs/uwmp2020/MPS\\_2020\\_UWMP\\_FINAL.pdf](https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf), accessed May 17, 2023.

<sup>9</sup> California Water Service, June 2021, *2020 Urban Water Management Plan, Mid-Peninsula District*, [https://www.calwater.com/docs/uwmp2020/MPS\\_2020\\_UWMP\\_FINAL.pdf](https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf), accessed August 7, 2023.

## UTILITIES AND SERVICE SYSTEMS

The 2020 UWMP describes water demands, water supply sources, and supply reliability for its service area in five-year increments for normal years, single dry years, and multiple dry years. The UWMP also provides water supply contingency planning in case of shortage emergencies, demand management measures to increase water use efficiency, and current and planned water conservation efforts. The UWMP states that there will be sufficient supplies to meet existing and future demands through 2045 for normal years, but that there could be a shortage of water supplies in single-dry years and multiple-dry years under the worst-case scenario. Additional details are provided in the Existing Conditions setting.

### Cal Water-Mid-Peninsula District: Water Supply Planning Documents

Cal Water-MPS uses a series of integrated planning processes and reports to support water resource and environmental sustainability efforts and updates them on a recurring basis to adjust to changing conditions and risks and ensure that there are sufficient water supplies for their customers. Pertinent plans and studies used by Cal Water-MPS are summarized below:

- **Climate Change Study.** This study consists of two parts: Phase 1, Water Resources Monitoring and Adaptation Plan, and Phase 2, Climate Change Risk Assessment and Adaptation Framework. These studies analyze climate-related vulnerabilities in Cal Water service areas, facilities, operations, and water supply portfolios. The results indicate how risks may change over time based on vulnerabilities, such as sea level rise and wildfires, and provide a framework for future mitigation and adaptation planning.
- **Water Supply and Demand Assessment.** This document is an annual report submitted to DWR that requires each urban water supplier to prepare an annual assessment and an annual shortage report that evaluates the near-term water supply reliability and describes actions that are taken to address potential shortages, including implementation of the Water Shortage Contingency Plan.
- **Urban Water Management Plans.** UWMPs are completed every five years and provide critical information for the Cal Water-MPS service area, including historical and projected water demands, water supplies, supply reliability, potential vulnerabilities, water shortage contingency planning, and demand management programs.
- **Water Shortage Contingency Plans.** The WSCP is included as an appendix to the UWMP and is updated every five years. The plan outlines appropriate responses during water supply shortages and interruptions to protect health and safety, minimize economic disruption, and present environmental and community assets. The Cal Water-MPS WSCP is discussed in further detail below.
- **Conservation Master Plans.** These plans are also included as an appendix to the UWMP and updated on a five-year cycle. The plans summarize the mix of conservation measures that Cal Water plans to implement, including the estimated water savings, costs, and effects on water demand, as well as progress toward reaching its conservation goals.
- **Water Supply Reliability Plans/Studies.** These plans and studies evaluate the reliability of existing regional water supplies and assess supply and demand options to enhance future reliability. The reports also contain water supply project recommendations for facilities planning processes.
- **Water Supply and Facilities Master Plans.** Based on the water supply strategies, these plans forecast potential infrastructure needs and support long-term operational reliability.

## UTILITIES AND SERVICE SYSTEMS

### Cal Water -Mid-Peninsula District: Water Shortage Contingency Plan (WSCP)

The Cal Water-MPS 2020 UWMP includes the WSCP which outlines stages of response to water shortages caused by drought or supply interruptions.<sup>10</sup> The primary objective of the WSCP is to ensure that the District has in place the necessary resources and management responses to protect health, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

Water shortage levels range from 1 to 6, with goals to reduce water demand by 10 percent to over 50 percent, respectively. Stage 1 measures include: 1) limiting landscape irrigation to specific times, 2) prohibit the application of potable water to outdoor landscapes within 48 hours of measurable rainfall, 3) restaurants may only serve water upon request, and 4) prohibit the use of potable water for decorative water features that do not recirculate water. Stage 5, designated as an emergency shortage, requires net zero demand increase on new water service connections and prohibits single-pass cooling systems. Stage 6, which is classified as an extreme shortage, enacts a moratorium on new water service connections and prohibits all landscape irrigation.

### Estero Municipal Improvement District: Urban Water Management Plan

EMID provides potable water to Foster City and an area of San Mateo known as Mariners Island. The 2020 UWMP prepared by EMID indicates that there will be sufficient water supplies available to meet demands during normal years through 2045. However, there will be shortage in single dry years and multiple dry years, as is the case with Cal Water.<sup>11</sup> The shortage is directly the result of implementation of the Bay Delta Plan Amendment (discussed below), which would limit Cal Water-MPS and EMID's surface water supplies. Both UWMPs conservatively assume that the Bay Delta Plan Amendment would be fully implemented for planning purposes.

### Estero Municipal Improvement District: Water Shortage Contingency Plan

EMID has prepared a stand-alone WSCP document that would be implemented in the event of water shortages.<sup>12</sup> The WSCP provides the steps and water shortage response actions to be taken during water shortage conditions, whether as a result of a drought or supply interruptions. The WSCP also describes EMID's procedures for conducting an Annual Water Supply and Demand Assessment that is required by the California Water Code and is submitted to DWR on or before July 1 of each year.

Some of EMID's restrictions during Stage 5 shortage levels include 1) prohibition of watering of golf courses, parks, school grounds, and recreation fields; 2) irrigation limited to one day per week; and 3) prohibition of water for agricultural or commercial nursery purposes, except livestock watering. For Stage 6 shortage levels, EMID may prohibit all landscape irrigation and limit the installation of new landscaping except for landscapes that use recycled water. Water for commercial, manufacturing, or processing

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<sup>10</sup> California Water Service, June 2021, *2020 Urban Water Management Plan, Mid-Peninsula District*, Appendix L: *Water Shortage Contingency Plan*, [https://www.calwater.com/docs/uwmp2020/MPS\\_2020\\_UWMP\\_FINAL.pdf](https://www.calwater.com/docs/uwmp2020/MPS_2020_UWMP_FINAL.pdf), accessed May 16, 2023.

<sup>11</sup> Estero Municipal Improvement District, 2021, *2020 Urban Water Management Plan*.

<sup>12</sup> EMID, 2021, *Water Shortage Contingency Plan*, Appendix J of the UWMP. Prepared by Maddaus Water Management, Inc.

## UTILITIES AND SERVICE SYSTEMS

purposes would be reduced in volume by up to 50 percent and no new permits for pools would be issued. Water for air conditioning is also prohibited.

### Estero Municipal Improvement District: Water Distribution System Master Plan

In April 2020, EMID completed a Water Distribution System Master Plan that includes a water demand analysis, hydraulic modeling to determine existing and future deficiencies in the water supply system, and a long-range, 20-year Capital Improvement Plan (CIP).<sup>13</sup> EMID's distribution system starts at a 24-inch transmission main turnout from SFPUC's 54-inch Crystal Springs Pipeline No. 2. The distribution system consists of two pressure-reducing stations, four water storage tanks, a booster pump station, and about 135 miles of distribution pipelines that deliver potable water to approximately 8,120 service connections. The system is typically able to meet 24 hours of maximum daily demand plus four hours of fire flow. There are a few isolated areas with fire flow deficiencies. The CIP addresses these issues, including a project to extend the pipeline along Detroit Drive and improve fire flow to San Mateo's Wastewater Treatment Plant.

### 2023 EMID Water Capacity Study

As part of the Foster City Housing Element Update, a WSA was prepared as part of the EIR process.<sup>14</sup> The WSA evaluated all of the current and proposed development projects within EMID's service area, including the Mariners Island portion of San Mateo. Net water demand was calculated accounting for existing water use that would be replaced by new development projects. Four planned redevelopment projects within the City of San Mateo were included in the evaluation.<sup>15</sup> The water demand associated with the Housing Element Update, plus existing and future water demands over a 20-year period, will be met during normal years. However, EMID's total water demand during single and multiple dry years is expected to exceed EMID's available water supplies from 2025 to 2045.

### Bay Delta Plan Amendment

The reliability of water supplies for Cal Water-MPS and EMID is impacted if and when the Bay Delta Amendment is enacted, because the sole source of their water supplies is from the San Francisco Public Utilities Commission (SFPUC)'s Regional Water System (RWS). In December 2018, the SWRCB adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, known as the Bay-Delta Plan Amendment, to establish water quality objectives to maintain the health of the Bay-Delta ecosystem and increasing salmonid populations. The Bay-Delta Amendments requires the release of 30 to 50 percent of "unimpaired flow" on three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) from February through June during normal years and drought conditions.

If the Bay-Delta Plan Amendment is implemented, the SFPUC would be able to meet projected water demands for their retail customers in normal years but would experience supply shortages in single dry

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<sup>13</sup> HydroScience Engineers, Inc., 2020, Estero Municipal Improvement District Water Distribution System Master Plan Study.

<sup>14</sup> EMID, 2023, Foster City Housing and Safety Elements Update EIR, Appendix D, Water Capacity Study.

<sup>15</sup> Bridgepointe Redevelopment; 901/951 Mariner's Island Blvd Office to Life Science Building Conversion; 1400 Fashion Island Blvd; and 999 Baker Way.



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years and multiple dry years. This impacts the water supplies of both Cal Water-MPS and EMID, as documented in their 2020 UWMPs for single dry years and multiple dry years. The SFPUC has initiated an Alternative Water Supply Planning Program (AQSP) to meet its retail and wholesale customer needs and limit rationing to a maximum 20 percent system wide.

Since adoption of the Bay-Delta Plan Amendment, over a dozen lawsuits have been filed, in both State and federal courts, challenging the SWRCB's adoption of the amendment. This litigation is in the early stages and there have been no court rulings as of this date. SFPUC is also in negotiations with the SWRCB to provide an "alternative" for a future amendment to the Bay-Delta Plan. Nevertheless, the Cal Water-MPS and EMID 2020 UWMPs conservatively assume that the Bay-Delta Plan would be implemented in quantifying future water supplies and reliability.

### San Francisco Public Utilities Commission Water System Improvement Plan

The SFPUC's Water System Improvement Plan (WSIP) is expected to mitigate the impacts of the Bay Delta Plan Amendment by undertaking a number of water supply projects to meet dry year demands with no greater than 20 percent system-wide rationing. These projects include the following:

- **Calaveras Dam Replacement Project.** The SFPUC constructed a new dam of equal height downstream of the existing dam to address seismic vulnerabilities. The project was completed in 2019.
- **Alameda Creek Recapture Project.** As part of the regulatory requirements, the SFPUC must implement bypass and instream flow releases for Alameda Creek. This project will recapture a portion of the water yield lost by these restrictions and return this yield to the RWS through facilities in Sunol Valley. Water that infiltrates from Alameda Creek will be recaptures into an existing quarry pond and pumped to the Sunol Valley Water Treatment Plant or to San Antonio Reservoir.
- **Lower Crystal Springs Dam Improvements.** Improvements to Lower Crystal Springs Dam and the joint San Mateo/SFPUC Bridge Replacement Project have been completed so that the reservoir elevation can now be raised. However, the raising of the reservoir elevation is being delayed with the discovery of the endangered species, the Fountain Thistle. New plant populations must be restored before the reservoir elevation is raised.
- **Regional Groundwater Storage and Recovery Project.** SFPUC, Cal Water, Daly City, and San Bruno entered into a strategic partnership to conjunctively operate the south Westside Groundwater Basin. During years of normal or heavy rainfall, the project provides additional surface water to the partner agencies in San Mateo County in lieu of groundwater pumping. Reduced pumping results in water storage through natural recharge of up to 20 billion gallons of new supply that is available during dry years. Phase I, which consists of the construction of 13 wells, is complete. Phase 2, which involves three additional groundwater test wells and completion of the South San Francisco Main well and pipeline, is scheduled for completion in 2023.

### San Francisco Public Utilities Commission Alternative Water Supply Program

The SFPUC is also exploring other projects that would increase overall water resilience through implementation of the Alternative Water Supply (AWS) program. Some of the projects include:

## UTILITIES AND SERVICE SYSTEMS

- Los Vaqueros Reservoir Expansion Project would enlarge the existing reservoir from 160,000 acre feet to 275,000 acre feet.
- Daly City Recycled Water Expansion would replace some of the groundwater pumping, enhancing the reliability of the groundwater basin.
- Alameda County Water District and Union Sanitary District joint project with SFPUC to produce purified water for groundwater recharge or put to other use in ACWD's service area. With additional water supply to ACWD, more water would be left in the RWS for use by SFPUC.
- Crystal Springs Purified Water Project – treated wastewater from Silicon Valley Clean Water and/or the City of San Mateo would go through advanced treatment and delivered to Crystal Springs Reservoir.
- Bay Area regional Reliability Shared Water Access Program is a consortium of eight Bay area water utilities that are exploring opportunities to move water across the region through various conveyance pathways and better prepare for sharing water during drought conditions or supply emergencies.
- Groundwater Banking in the Modesto Irrigation District and Turlock Irrigation District service areas could be used to provide additional water supply to meet instream releases in dry year.

### Water Neutrality Ordinances

Foster City and EMID have recently adopted a "Water Neutrality Ordinance" to offset new water demand with water efficiency measures to create a neutral (or net zero) impact on the water use demand in the EMID service area. The policy requires new development, redevelopment, or land use changes within the EMID service area (which includes a portion of San Mateo) that will increase water demand above the existing water demand level to offset the demand with water efficiency/conservation/retrofit measures to create a net neutral impact.

For new development or redevelopment, the property's baseline water demand (provided by EMID staff) is compared to the applicant's calculated projected water demand to demonstrate a zero-water use increase in the proposed development. The baseline is the average water use for the property over the previous five years. Where no water data is available, the baseline water demand is the five-year average of properties in the same customer class with the same meter size. The applicant provides a projected water demand and calculates a new water demand. The applicant is also required to implement on-site water efficiency measures to offset the new water demand, which might include:

- Using alternative water sources, such as graywater or rainwater
- Instant hot water heaters
- Pressure reducing valves to prevent higher pressures from rupturing valves or pipes
- Installing ultra-high efficiency plumbing fixtures and appliances that exceed current regulatory flow rates
- Covers for swimming pools and spas

Additionally, automatic fill valves for water features, such as swimming pools and ponds, would not be allowed.

If the new development with all practical on-site water efficiency measures still exceeds the new water demand, then the applicant is required to identify off-site measures that would achieve water neutrality.

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This may include direct installation of ultra-high-efficiency toilets and other plumbing fixtures in older homes; turf replacement; and commercial, institutional, industrial appliance upgrades within the EMID service area. Any new development within San Mateo that is in EMID's service area would be subject to these requirements.

Cal Water is also implementing a Development Offset Program for the three Peninsula Districts which rely on SFPUC supplies, which includes Cal Water-MPS that serves San Mateo. The program requires any new residential, commercial, or industrial development that is projected to increase demand by more than 50 AFY to pay a special facilities fee, referred to as a developer offset fee, consisting of \$15,400 per AF of net demand increase. The net demand increase is defined as the project's projected water demand minus the existing water demand averaged over the previous 5-year period. Cal Water-MPS will verify compliance with the program at the time of construction and that all offset fees and/or conservation measures have been completed prior to establishing a water connection. The fees collected from the Development Offset Program will fund water supply projects and expanded conservation programs, thus improving overall sustainability and resiliency.

### *Local Regulations*

#### San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to water are primarily in the Public Services and Facilities Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to mitigate adverse impacts to water infrastructure and supplies later in this chapter under Section 4.17.1.3, *Impact Discussion*.

#### City of San Mateo Municipal Code

The SMMC includes various directives pertaining to water. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to water impacts are included in Title 23, *Buildings and Construction*.

- Chapter 23.16, *Plumbing Code*, adopts the 2022 California Plumbing Code, California Code of Regulations, Title 25, Part 5.
- Chapter 23.70, *Green Building Code*, adopts the California Green Building Standards Code, 2022 Edition, Title 24, Part 11 of the California Code of Regulations.
- Chapter 23.72, *Water Conservation in Landscaping*, complies with California's MWELO and has more stringent requirements. New construction projects with a landscape area equal to or greater than 500 square feet or rehabilitated landscape projects with a landscape area equal to or greater than 1,000 square feet must comply with this ordinance. Project applicants must submit a landscape documentation package which includes water budget calculations, soil management report, landscape design plans, irrigation system design plans, and grading design plan. Upon completion of the work, the applicant must submit a Certificate of Completion to the City. All owners of existing

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landscapes over one acre in size are subject to irrigation audits, surveys, and water use analyses, as administered by the local water purveyor.

- Chapter 26.16.020, *Water Supply*, states that the proposed water supply for a project and the locations of all fire hydrants shall meet the requirements of the City's design standards, as determined by the Director of Public Works and the Fire Chief.

### Existing Conditions

There are two primary water purveyors that serve the City of San Mateo: Cal Water-MPS and EMID. Cal Water-MPS serves most of the EIR Study Area and EMID serves Foster City and the Mariners Island area of San Mateo. Figure 4.17-1, *Water Suppliers*, depicts the boundaries of water districts and service areas of the San Mateo water suppliers. Both Cal Water-MPS and EMID purchase all of their water supplies from SFPUC's Regional Water System, which consists entirely of surface water.

#### *Cal Water Mid-Peninsula District*

Cal Water-MPS provides potable water to the Cities of San Mateo and San Carlos and adjacent unincorporated portions of San Mateo County, including The Highlands, which is within the City of San Mateo's Sphere of Influence, and Palomar Park. The City of Belmont separates the two cities and divides Cal Water-MPS into two separate Public Water Systems (PWSs). These systems include 35 storage tanks, 54 booster pumps, and 383 miles of pipeline that deliver roughly 12 million gallons of water per day to more than 35,000 service connections.<sup>16</sup>

The water supply consists entirely of surface water purchased from the SFPUC via the Regional Water System (RWS). Approximately 85 percent of the water supply to the SFPUC RWS originates in the Hetch Hetchy watershed and flows down the Tuolumne River into the Hetch Hetchy Reservoir. The remaining 15 percent of the water supply originates locally in the Alameda and Peninsula watersheds and is stored in six reservoirs in Alameda and San Mateo Counties. Crystal Springs, San Andreas, and Pilarcitos Reservoirs, located in San Mateo County, capture local runoff in the Peninsula watershed. The purchased water is treated by SFPUC prior to delivery to Cal Water-MPS.<sup>17</sup>

<sup>16</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.

<sup>17</sup> California Water Service, June 2021, 2020 Urban Water Management Plan, Mid-Peninsula District.

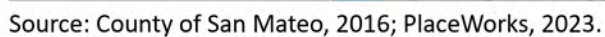


Figure 4.17-1  
Water Suppliers

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The amount of water available to the SFPUC's wholesale and retail customers is constrained by hydrologic conditions, physical facilities, and institutional parameters that allocate the water supply of the Tuolumne River. Because of these constraints, the SFPUC is dependent on reservoir storage to augment its water supplies.

Cal Water has a Water Supply Agreement with SFPUC which specifies an Individual Supply Guarantee of 35.68 million gallons in normal hydrologic years, which is shared among three Cal Water Districts: Bear Gulch, Mid-Peninsula, and South San Francisco. The amount of water available to Cal Water-MPS in any given year varies and depends on the availability of local supplies in Bear Gulch and South San Francisco Districts. Cal Water-MPS does not currently use groundwater or recycled water as part of its water supplies.

The water demand for Cal Water-MPS from 2020 through 2040 is shown in Table 4.17-1, *Cal Water-MPS Water Demands – 2020 to 2040 (AFY)*. Residential customers account for approximately 72 percent of the total water demand. This water demand in Table 4.17-1 includes both the Cities of San Mateo and San Carlos. San Mateo accounts for approximately 77 percent of the total water demand. The increase in water demand over a 20-year period is minimal, because Cal Water-MPS accounts for both active and passive water conservation measures in their future projections. By the year 2040, water conservation measures are expected to save 1,247 AF annually.

**TABLE 4.17-1 CAL WATER-MPS WATER DEMANDS – 2020 TO 2040 (AFY)**

	2020	2025	2030	2035	2040
Single Family	8,263	8,146	8,094	8,108	7,997
Multi-Family	2,155	2,204	2,370	2,499	2,720
Commercial	2,467	2,345	2,301	2,368	2,409
Institutional	724	718	722	755	787
Industrial	31	31	31	31	31
Other Potable	103	121	121	121	121
Losses	820	853	891	904	912
<b>Total</b>	<b>14,563</b>	<b>14,418</b>	<b>14,530</b>	<b>14,786</b>	<b>14,977</b>

Source: Cal Water-MPS, 2021, 2020 Urban Water Management Plan, Table 4-2.

The Cal Water-MPS 2020 UWMP also includes a water supply reliability assessment for normal, single dry years, and multiple dry years. The results are provided in Table 4.17-2, *Cal Water-MPS Supply and Demand Comparison – 2025 to 2040 (AFY)*.



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**TABLE 4.17-2 CAL WATER-MPS SUPPLY AND DEMAND COMPARISON – 2025 TO 2040 (AFY)**

	2025	2030	2035	2040
<b>Normal Year</b>				
Supply Totals	14,418	14,530	14,786	14,977
Demand Totals	14,418	14,530	14,786	14,977
Difference	0	0	0	0
<b>Single Dry Year</b>				
Supply Totals	9,470	9,541	9,708	9,676
Demand Totals	14,797	14,908	15,168	15,359
Difference	(5,327)	(5,367)	(5,460)	(5,683)
<b>Multiple Dry Years</b>				
<i><b>First Year</b></i>				
Supply Totals	9,170	9,146	9,186	9,296
Demand Totals	15,031	15,143	15,405	15,595
Difference	(5,862)	(5,996)	(6,219)	(6,299)
<i><b>Second Year</b></i>				
Supply Totals	7,863	7,847	7,871	7,975
Demand Totals	15,031	15,143	15,405	15,595
Difference	(7,168)	(7,295)	(7,534)	(7,620)
<i><b>Third Year</b></i>				
Supply Totals	7,863	7,847	7,871	7,975
Demand Totals	15,031	15,143	15,405	15,595
Difference	(7,168)	(7,295)	(7,534)	(7,620)
<i><b>Fourth Year</b></i>				
Supply Totals	7,863	7,847	7,871	7,036
Demand Totals	15,031	15,143	15,405	15,595
Difference	(7,168)	(7,295)	(7,534)	(8,559)
<i><b>Fifth Year</b></i>				
Supply Totals	7,863	7,847	7,216	7,036
Demand Totals	15,031	15,143	15,405	15,595
Difference	(7,168)	(7,295)	(8,189)	(8,559)

Source: Cal Water-MPS, 2021, 2020 Urban Water Management Plan, Tables 7.3, 7-4, and 7.5.

As can be seen in Table 4.17-2, Cal Water-MPS predicts that there will be sufficient water supplies to meet demands through year 2040 during normal years. However, there could be a shortage of water supplies in single dry and multiple dry years, if the Bay Delta Plan Amendment is implemented, leading to a reduction in allocations of water from SFPUC. There are numerous uncertainties regarding implementation of the Bay Delta Plan Amendment and these water supply projections are a worst-case scenario. It assumes that the SFPUC and SWRCB do not reach a voluntary agreement and that the SFPUC's Alternative Water Supply Program is not implemented. As stated in the 2020 UWMP, if the Bay Delta Plan Amendment is not

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implemented, SFPUC would be able to supply 100 percent of the projected RWS demands through 2040 during normal, single dry, and multiple dry years.<sup>18</sup>

Cal Water-MPS has developed a WSCP, as described previously, that outlines policies and actions that will be implemented at various shortage levels ranging from up to 10 percent to greater than 50 percent. In addition, as per California Water Code Section 10632.1, all urban water suppliers must submit to DWR by July 1<sup>st</sup> of each year an annual Water Supply and Demand Assessment. The assessment determines if the water supplier is likely to face water shortage and what actions the supplier will take to address any water shortages. Cal Water-MPS submitted the 2022 Annual Water Supply and Demand Assessment on June 30, 2022 and an updated report on September 9, 2022.<sup>19</sup> Cal Water-MPS is working independently and with local and regional stakeholders to identify alternative water supply projects that can be implemented, including groundwater development, brackish desalination, recycled water, water transfers, and expanded conservation programs.

### *Estero Municipal Improvement District*

EMID's service area mainly consists of Foster City with a small portion provided to San Mateo in the Mariners Island area, as shown on Figure 4.17-1. EMID also has two separate 12-inch emergency supply connections with Cal Water-MPS and Mid-Peninsula Water Agency, which serves the City of Belmont, San Carlos, and part of Redwood City, to use these connections during emergency situations. Foster City's Public Works Department manages and operates EMID. Similar to Cal Water-MPS, EMID receives its entire water supply from SFPUC and also holds an Individual Supply Guarantee with that entity. According to the agreement, EMID is guaranteed 5.9 million gallons per day (MGD), or approximately 6,610 AFY of water from SFPUC.<sup>20</sup> EMID does not use groundwater or recycled water as part of its water supplies.

The water demand for EMID customers from 2020 through 2040 is shown in Table 4.17-3, *EMID Water Demands – 2020 to 2040 (AFY)*. Residential customers account for approximately 54 percent of the total water demand in 2020 and landscape irrigation accounted for approximately 26 percent of the total. The water demand in Table 4.17-3 is primarily for the Foster City service area with a small portion of the water use for the Mariners Island area of San Mateo. EMID accounts for both active and passive water conservation measures in their future projections so the water savings by the year 2040 would be 785 AFY.

<sup>18</sup> California Water Service, June 2021, *2020 Urban Water Management Plan, Mid-Peninsula District*.

<sup>19</sup> EKI Environment & Water, 2022, Updated 2022 Annual Water Supply and Demand Assessment - Mid-Peninsula District.

<sup>20</sup> City of Foster City, July 2021, *2020 Urban Water Management Plan for Estero Municipal Improvement District*.

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**TABLE 4.17-3 EMID WATER DEMANDS – 2020 TO 2040 (AFY)**

	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>
Single Family	1,092	1,071	1,056	1,062	1,074
Multi-Family	1,558	1,528	1,482	1,467	1,464
Commercial <sup>a</sup>	469	574	629	654	678
Industrial	64	80	89	92	98
Irrigation	1,273	1,292	1,375	1,445	1,522
Other Potable	3	3	3	3	3
Losses	439	411	420	433	445
<b>TOTAL</b>	<b>4,896</b>	<b>4,956</b>	<b>5,051</b>	<b>5,159</b>	<b>5,288</b>

Notes: Units from EMID 2020 UWMP converted from MGY to AFY for consistency.

a. The commercial land use category includes institutional and governmental land uses.

Source: EMID, 2021. 2020 Urban Water Management Plan.

The EMID 2020 UWMP also evaluates water supply compared to demand for normal, single dry years, and multiple dry years. The results are provided in Table 4.17-4, *EMID Supply and Demand Comparison – 2025 to 2040 (AFY)*.

**TABLE 4.17-4 EMID SUPPLY AND DEMAND COMPARISON – 2025 TO 2040 (AFY)**

	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>
<b>Normal Year</b>				
Supply Totals	6,608	6,608	6,608	6,608
Demand Totals	4,954	5,050	5,157	5,286
Difference	1,654	1,558	1,451	1,322
<b>Single Dry Year</b>				
Supply Totals	3,169	3,218	3,273	3,019
Demand Totals	4,954	5,050	5,157	5,537
Difference	(1,785)	(1,831)	(1,881)	(2,519)
<b>Multiple Dry Years</b>				
<i><b>First Year</b></i>				
Supply Totals	3,169	3,218	3,273	3,019
Demand Totals	4,954	5,050	5,157	5,537
Difference	(1,785)	(1,831)	(1,881)	(2,519)
<i><b>Second Year</b></i>				
Supply Totals	2,715	2,761	2,807	2,878
Demand Totals	4,954	5,050	5,157	5,286
Difference	(2,239)	(2,289)	(2,350)	(2,408)
<i><b>Third Year</b></i>				
Supply Totals	2,715	2,761	2,807	2,878
Demand Totals	4,954	5,050	5,157	5,286

## UTILITIES AND SERVICE SYSTEMS

**TABLE 4.17-4 EMID SUPPLY AND DEMAND COMPARISON – 2025 TO 2040 (AFY)**

	2025	2030	2035	2040
Difference	(2,239)	(2,289)	(2,350)	(2,408)
<b><i>Fourth Year</i></b>				
Supply Totals	2,715	2,761	2,807	2,537
Demand Totals	4,954	5,050	5,157	5,286
Difference	(2,239)	(2,289)	(2,350)	(2,749)
<b><i>Fifth Year</i></b>				
Supply Totals	2,715	2,761	2,571	2,537
Demand Totals	4,954	5,050	5,157	5,286
Difference	(2,239)	(2,289)	(2,586)	(2,749)

Note: Supply and demand values converted from MGY to AFY for consistency.

Source: Estero Municipal Improvement District, 2021, 2020 Urban Water Management Plan.

As can be seen in Table 4.17-4, EMID predicts that there will be sufficient water supplies to meet demands through year 2040 during normal years. However, there will be a shortage of water supplies in single dry and multiple dry years, due to the assumption that the Bay Delta Plan Amendment would be implemented and there would be a reduction in allocations of water from SFPUC ranging from 36 percent to 52 percent during single and multiple dry years through 2040.

These water supply projections are conservative (i.e., they represent a “worst case” scenario) for the following reasons:

- Implementation of the Bay Delta Plan Amendment is under negotiation and a voluntary substitute agreement is being proposed by SFPUC and its water wholesale customers.
- The benefits of SFPUC’s Alternative Water Supply Program have not been accounted for in the current supply projections.
- The methodology for wholesale drought allocations has not been established for wholesale shortages greater than 20 percent.
- The SFPUC’s Regional Water System demand projections may change in the future based on future housing needs, increased conservation, and development of additional supplies, which will be reflected in future UWMPs.
- The frequency and duration of water supply reductions is uncertain.

EMID plans to address the insufficiency of water supplies during single and multiple dry years with a combination of the following actions:

- EMID plans to acquire and develop additional water supplies through SFPUC’s Water System Improvement Program.
- Prior to the issuance of future development project entitlements, project developers shall perform a utility analysis to determine whether existing transmission/distribution infrastructure has adequate capacity to deliver the water needed for the project.

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- EMID will coordinate with the City of San Mateo, SFPUC, and BAWSCA to assess options for using recycled water in the future to offset new potable water demands.
- EMID is in the process of developing a water neutral growth policy for new development.
- EMID has completed a Recycled Water Facilities Plan (2017) with the City of San Mateo that discusses ways to provide recycled water to both service areas and/or use recycled water produced at the San Mateo Wastewater Treatment Plant (WWTP) for regional potable reuse opportunities (e.g., installing a pipeline from the WWTP to SFPUC's Lower Crystal Springs Reservoir).

While these measures are in various stages of enactment, EMID will continue to implement its WSCP that defines specific policies and actions for various shortage level scenarios, identifies a suite of demand reduction measures to be implemented at each level, and identifies procedures for EMID to annually assess whether or not a water shortage is likely to occur in the coming year, as documented in the Annual Water Supply and Demand Assessment reports submitted to DWR.<sup>21</sup>

### 4.17.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to water supply if it would:

- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple-dry years.
- Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.
- In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to water supply.

### 4.17.1.3 IMPACT DISCUSSION

<b>UTIL-1</b>	<b>The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple-dry years.</b>
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The current and projected water demands from Cal Water-MPS and EMID's 2020 UWMPs are provided in Tables 4.17-1 through 4.17-4. Because both water purveyors have service areas that extend beyond San Mateo, the projections in those tables include the water demand for San Carlos, Foster City, and unincorporated areas of San Mateo County. However, to provide a detailed analysis, the discussion below evaluates the increase in water demand associated with buildout of the proposed project and compares it to future development the EIR Study Area within each of the water purveyors' service areas.

<sup>21</sup> EMID, 2022. 2022 Annual Water Supply and Demand Assessment.  
[https://wuedata.water.ca.gov/public/wsda\\_attachments/7934949576/TM%20AWSDA%20%28Estero%20Municipal%20Improvement%20District%29%2Epdf](https://wuedata.water.ca.gov/public/wsda_attachments/7934949576/TM%20AWSDA%20%28Estero%20Municipal%20Improvement%20District%29%2Epdf) accessed on May 22, 2023.

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As discussed in detail in Chapter 3, *Project Description*, of this Draft EIR, the buildout of the proposed project is expected to result in approximately 21,410 new dwelling units and approximately 4,325,200 square feet of new office and public/institutional land uses. New construction would comply with the more stringent requirements of CALGreen, California Plumbing Code, and the City's WELO. Only 3.2 percent of the current residences were built after 2010,<sup>22</sup> when the CALGreen Building Code was first implemented and the installation of water-conserving plumbing fixtures and fittings were mandated. Although new construction of both residential and commercial land uses typically achieve a reduction in water usage rates of 20 percent through compliance with these regulations, this analysis conservatively assumes that water usage would be similar to the rates provided in the Cal Water-MPS and EMID UWMPs.

### Water Demand Analysis – Cal Water-MPS

Based on mapping analysis conducted by the EIR preparers, buildout of the proposed project within Cal Water-MPS service area is estimated to be 18,400 new dwelling units (17,301 multi-family residences and 1,099 accessory dwelling units [ADUs]) and 2,879,500 of non-residential space, including office, research and development (R&D), life sciences, and public/institutional land uses. The water demand factors for multi-family residential and commercial land use were provided by Cal Water Bayshore MPD. Cal Water-MPS does not currently have water demand factors for ADUs; therefore, values of 48 gpcd and 1.5 people per ADU from the EMID Water Capacity Study were used. The calculations for the water demand increase with buildout of the proposed project are provided in Table 4.17-5, *Increase in Water Demand in Cal Water-MPS Service Area with 2040 Buildout*.

**TABLE 4.17-5 INCREASE IN WATER DEMAND IN CAL WATER-MPS SERVICE AREA WITH 2040 BUILDOUT**

Category	Number (DUs or SF)	Water Use Factor	Increase in Water Demand (gpd) <sup>b</sup>	Increase in Water Demand (AFY)
Multi-Family Residential	17,301	65 gpd/DU	1,712,799	1918.6
ADUs	1,099	48 gpcd <sup>a</sup>	71,215	78.9
Non-Residential	2,879,500	0.068 gpd/sf	279,312	312.9
<b>Total</b>			<b>2,063,326</b>	<b>2,311.2</b>

Notes: DUs = dwelling units; SF = square feet; gpd = gallons per day; AFY = acre feet per year; gpcd = gallons per capita per day

a. Assumes 1.5 people per ADU and a reduction of 10 percent of the demand for removal of existing landscaping. (Source: Estero Municipal Improvement District, 2023, Water Capacity Study)

b. Demand calculations do not account for water conservation efforts and the effect of reduced water demand for new construction due to compliance with the CALGreen Building Code and the latest California Plumbing Code.

Source: PlaceWorks, 2023

Because Cal Water-MPS serves both San Carlos and San Mateo and a small portion of unincorporated San Mateo County, the proportion of the 2040 water demand that would be attributed to San Mateo was determined based on the service populations of these three areas in 2020. Statistics from the California Department of Finance indicate that in 2020 the San Mateo population was 105,751 and San Carlos population was 30,748, and 987 people are estimated to be served in unincorporated San Mateo County

<sup>22</sup> Cal Water Service, 2021, 2020 Urban Water Management Plan, page 31.



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(Highlands and Palomar Park).<sup>23</sup> Therefore, it is assumed that San Mateo comprises 77 percent of the Cal Water-MPS water demand.<sup>24</sup> A supply and demand analysis is provided in Table 4.17-6, *Cal Water-MPS Water Supply and Demand with 2040 Buildout*.

**TABLE 4.17-6 CAL WATER-MPS WATER DEMAND AND SUPPLY WITH 2040 BUILDOUT**

Normal Year	2020 Existing Demand (AFY)	2020 to 2040 Projected Demand Increase (AFY)	2040 Total Water Demand (AFY)	2040 Projected Water Supply (AFY)	2040 Demand Exceeds Supply?
Total Service Area, from UWMP	14,563	414	14,977	14,977	No
San Mateo Service Area, with 2040 Buildout	11,214 <sup>a</sup>	2,311 <sup>b</sup>	13,525	11,532 <sup>c</sup>	Yes

Notes: AFY = acre feet per year

a. Assumed to be 77 percent of total water demand as reported in Cal Water-MPS 2020 UWMP.

b. Based on projected buildout under the proposed project, as shown in Table 4.17-5, *Increase in Water Demand in Cal Water Bayshore MPD Service Area with 2040 Buildout*.

c. Assumed to be 77 percent of total water supply as reported in Cal Water-MPS's UWMP.

Source: Cal Water MPS, 2021, 2020 Urban Water Management Plan; PlaceWorks, 2023.

As shown in Table 4.17-2, Cal Water-MPS shows that the water supplies will exactly meet the demand anticipated in the 2020 UWMP in normal years through year 2040. This is not an indication that additional supply is not available as the Cal Water-MPS 2020 UWMP does not list excess supply that may be available. The 2020 UWMP projects a very small increase in water demand in the 20-year period between 2020 and 2040. This is due to a smaller projected increase in the service population between 2020 and 2040 (10,316 people) as compared to Plan Bay Area 2040 projections for San Carlos and San Mateo, which estimates an increase of 25,380 people.<sup>25</sup> Also, the 2020 UWMP assumes that water conservation efforts would result in a decrease in per capita water demand, even with population increases. The calculations provided in Table 4.17-5 that show an increase in water demand of 2,311 AFY with buildout of the proposed project do not account for water conservation efforts, the Development Offset Program, and the effect of reduced water demand for new construction due to compliance with the CALGreen Building Code and the latest California Plumbing Code. Nevertheless, based on these water supply projections, there is a projected shortage of water supplies to meet the demand with the proposed project buildout for normal years and single and multiple dry years.

One way to offset the shortage of water supplies during normal and multiple dry years would be to continue implementing water conservation measures. Cal Water-MPS enforces water waste prevention and water use restrictions, as authorized by the California Public Utilities Commission (CPUC) and coordinates its efforts with local governments. Cal Water-MPS meters all service connections and bills

<sup>23</sup> San Mateo and San Carlos population source: Department of Finance, 2023, Table 2: E-5 City/County Population and Housing Estimates, 4/1/2020. Unincorporated San Mateo County population calculated as the difference between Cal Water's total service population (as reported in Cal Water's UWMP) and the population estimates for San Mateo and San Carlos. 137,486 total service population – 136,499 population in San Mateo and San Carlos = 987 population in unincorporated San Mateo County.

<sup>24</sup> 105,751 / 137,486 = 77 percent.

<sup>25</sup> Association of Bay Area Governments, 2018, Plan Bay Area Projections 2040.

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customers for water use on a monthly basis. Cal Water Bayshore MPD uses conservation pricing with a three-tier increasing block rate for residential water use. The water agency has a comprehensive public education and outreach program and conducts an annual distribution system audit to reduce water system losses.<sup>26</sup>

In addition, Cal Water-MPS operates rebate, give-away, and direct installation programs aimed at plumbing fixture replacement, irrigation equipment, and landscape efficiency. Cal Water-MPS has a rebate program for high-efficiency toilet replacement, high-efficiency urinal replacement, and high-efficiency clothes washer replacement. Cal Water-MPS also has residential conservation kits that are free, with high-efficiency showerheads, bathroom and kitchen faucet aerators, toilet leak tables, and an outside full-stop hose nozzle. For outdoor water use, Cal Water-MPS provides rebates for smart irrigation controllers, high-efficiency sprinkler nozzles, large rotary nozzle replacement, spray bodies with pressure regulation and check valves, and turf replacement. Cal Water-MPS also provides landscape audits and sprinkler adjustments at no charge, technical assistance through the residential customer portal, and commercial water surveys. Because over 90 percent of the housing in the Cal Water-MPS service area was built prior to 2000, there are ample opportunities for retrofitting and replacement of inefficient water fixtures to reduce existing and future water demand. Implementation of these programs over the last five years have resulted in water savings of approximately 772 AF.<sup>27</sup>

The City of San Mateo is almost entirely built out and new development would primarily be infill projects, which would replace older existing water users with high efficiency plumbing fixtures and landscape irrigation. The calculations provided in Table 4.17-5 do not take credit for the existing water demand that would be eliminated with infill projects.

Also, Cal Water-MPS has created a Development Offset Program that requires any new residential, commercial, or industrial development that is projected to increase demand by more than 50 AFY to pay a special facilities fee, referred to as a developer offset fee, or conduct off-site conservation measures. The net demand increase is defined as the project's projected water demand minus the existing water demand averaged over the previous 5-year period. The 50-AFY threshold is equivalent to approximately 450 single-family dwelling units or approximately 460,000 square feet of commercial land use. Cal Water-MPS will verify compliance with the program prior to the start of construction and that all offset fees and/or conservation measures have been completed prior to establishing a water connection. In addition, large projects that meet the criteria under SB 610 would need to prepare a WSA to ensure that there are sufficient water supplies for the project, and all project applicants would be required to obtain a will-serve letter from Cal Water-MPS prior to the issuance of building permits.

Cal Water-MPS would also implement the WSCP during single- and multiple-dry years, with water restrictions ranging from 10 to >50 percent. If the water shortage is at a Stage 5 level (requiring a demand reduction of up to 50 percent), new water connections must have a net zero demand increase. At a Stage 6 level (demand reduction greater than 50 percent), Cal Water-MPS has a moratorium on new water service connections.

<sup>26</sup> California Water Service, 2021, 2020 Urban Water Management Plan.

<sup>27</sup> California Water Service, 2021, 2020 Urban Water Management Plan.

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Cal Water-MPS coordinates on an ongoing basis with SFPUC, BAWSCA, City of San Mateo, City of San Carlos, San Mateo County, and other public and private entities to optimize the use of regional water supplies. Cal Water-MPS and the other Cal Water Districts are currently in the process of developing multiple regional water supply reliability studies using integrated resource planning to create a long-term supply reliability strategy through 2050. The studies will create long-term strategies to address water supply challenges including climate change, new regulatory requirements such as the Bay Delta Plan Amendment, and potential growth in demands due to new development. Cal Water-MPS is also included in the Bay Area Water Supply Reliability Analysis.<sup>28</sup>

### Water Demand Analysis - EMID

Based on mapping analysis conducted by the EIR preparers, buildout under the proposed project within EMID's service area is estimated to be 3,010 new dwelling units (10 new single-family residences and 3,000 multi-family residences) and 1,445,700 square feet of office space, including R&D and life sciences land uses. The water demand factors were obtained from EMID's Water Capacity Study. Four planned redevelopment projects in the San Mateo portion of EMID's service area were included in the Water Capacity Study: Bridgepointe Redevelopment, 901-951 Mariners Island Blvd, 1400 Fashion Island Blvd, and 999 Baker Way. As these four projects were already included in the EMID Water Capacity Study, the net increase in water demand for these projects was calculated separately. The remainder of the net water demand increase not already accounted for in EMID's analysis includes 1,822 housing units (10 single-family and 1,812 multi-family) and 985,282 square feet of office and R&D/life science land uses within the EMID service area.

The water demand factors from the EMID Water Capacity Study assume 65 gpcd for single-family residences and 48 gpcd for multi-family residences. This analysis assumes a household size of 2.59 people per household, consistent with the buildout projection assumptions for the proposed project. Office space is assumed to use 13 gallons per year per square foot (GPY/SF) and R&D land uses are assumed to use 25 GPY/SF, consistent with assumptions in EMID's Water Capacity Study. It was conservatively assumed that all new construction would be R&D land uses since this is the higher water usage rate and there is a current trend in converting existing office space to R&D uses. The calculations are provided in Table 4.17-7, *Increase in Water Demand in EMID Service Area at 2040 Buildout*.

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<sup>28</sup> California Water Service, 2021, 2020 Urban Water Management Plan.

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**TABLE 4.17-7 INCREASE IN WATER DEMAND IN EMID SERVICE AREA AT 2040 BUILDOUT**

Category	Number (DUs or SF)	Water Use Factor (gpcd <sup>a</sup> or gpd/SF)	Increase in Water Demand (gpd)	Increase in Water Demand (AFY)
Single-Family Residential	10	65	1,583.5	1.9
Multi-Family Residential	1,812	48	225,268	252
Commercial/R&D	985,282	0.068	67,485	75.5
<b>TOTAL</b>			<b>294,436</b>	<b>330</b>

Notes: DUs = dwelling units; SF = square feet; gpcd = gallons per capita per day; gpd/SF = gallons per day per square foot; gpd = gallons per day; AFY = acre feet per year; R&D = research and development

a. Assumes 2.59 people per dwelling unit

Source: EMID, 2023, Water Capacity Study; PlaceWorks, 2023.

The calculations in Table 4.17-7 indicate a net new water demand within the EMID service area of 330 AFY with buildout of the proposed project. The Water Capacity Study included a net increase in water demand of 94 AFY for planned projects within San Mateo in the EMID service area. This results in a total net increase in water demand of 424 AFY in the EMID service area by 2040 with buildout of the proposed project. Table 4.17-8, *EMID Supply and Demand at 2040 Buildout*, provides an analysis of the EMID water supply and demand under normal conditions with the proposed project's 2040 buildout.

**TABLE 4.17-8 EMID SUPPLY AND DEMAND AT 2040 BUILDOUT**

Normal Year	(AFY)
2020 Existing Demand with Passive and Active Conservation	4,100
Net Demand from New Development in EMID Service Area (including San Mateo projects)	543
Additional San Mateo Water Demand from 2040 Buildout Not Previously Accounted for by EMID	330
Total System Demand	<b>4,973</b>
SFPUC Supply	<b>6,610</b>
Excess Water Supply	1,637
Sufficient Water Supply with Proposed 2040 Buildout Under Normal Conditions?	Yes

Source: EMID, 2023, Water Capacity Study; PlaceWorks, 2023.

The calculations in Table 4.17-8 indicate that EMID has sufficient water supplies to accommodate the growth associated with the future development under the proposed project within the EMID service area under normal conditions. However, there will not be sufficient water supplies under single- and multiple-dry year conditions, assuming implementation of the Bay Delta Plan Amendment and SFPUC supply restrictions. This would be true even without the additional 330 AFY of water demand from the proposed project buildout. However, SFPUC indicates that if the Bay Delta Plan Amendment is not implemented, there would be sufficient water supplies for all of its wholesale customers through 2040 with no restrictions. For year 2045 during the 4<sup>th</sup> or 5<sup>th</sup> year of consecutive drought, there may be cutbacks of about 9.2 percent.<sup>29</sup>

In addition, as discussed above, EMID would implement the WSCP during single- and multiple-dry years, with water restrictions ranging from 10 to 50 percent. However, even with these restrictions, there still

<sup>29</sup> EMID, 2021, 2020 Urban Water Management Plan, Appendix H, Regional Water Supply Reliability and BAWSCA Tier 2 Drought Implementation Scenarios.

## UTILITIES AND SERVICE SYSTEMS

would be a shortage in water supplies with implementation of the Bay Delta Plan Amendment. Therefore, EMID and Foster City have implemented a Water Neutrality Ordinance that requires new development, redevelopment, or changes in land use within the EMID service area that will need new water service or that will increase water demand in excess of existing conditions to offset the projected new water demand with water efficiency/conservation/retrofit measures to create a neutral (or net zero) impact. This ordinance would also apply to all new development in San Mateo that is within EMID's service area.<sup>30</sup> In conjunction with implementation of the WSCP during drought conditions, this ordinance should minimize increases in water demand with future development and alleviate concerns regarding water shortages if and when the Bay Delta Plan Amendment is implemented.

There also is the potential for water right transfers within the SFPUC Regional Water System. The Water Shortage Allocation Plan adopted by all BAWSCA agencies and the SFPUC provides the basis for voluntary transfers of water among BAWSCA agencies during periods when mandatory rationing is in place. Also, EMID has two emergency interconnections: with Cal Water-MPS and Mid-Peninsula Water District that would enable the short-term transfer of water due to disruptions in normal supply resulting from an earthquake or other emergency.<sup>31</sup>

### Summary

As described above, in the Cal Water-MPS service area, there is expected to be a shortage of water supplies to meet the demand with the proposed buildout for normal years and single and multiple dry years, assuming implementation of the Bay Delta Plan Amendment and SFPUC supply restrictions. Also, the water demand analysis presented above is conservative because no credit was taken for future active and passive conservation efforts because the Conservation Tracking Tool used in Cal Water-BPS UWMP is a proprietary model.

In the EMID service area, there is expected to be sufficient water supplies to meet demand under normal conditions but not under single- and multiple-dry year conditions, assuming implementation of the Bay Delta Plan and SFPUC supply restrictions.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require planning and development decisions to consider impacts to water supplies and resources. The following proposed General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts to water supplies with future development:

- **Goal PSF-2:** Support access to a safe, sustainable, and resilient supply of water for San Mateo.
  - **Policy PSF 2.1: Supplemental Water Sources.** Support efforts by California Water Service, Estero Municipal Improvement District, and adjacent jurisdictions to develop supplemental and resilient water sources.

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<sup>30</sup> City of Foster City, 2023. Resolution No. \_\_\_\_\_, Estero Municipal Improvement District, Water Neutrality Growth Policy.

<sup>31</sup> Estero Municipal Improvement District, 2021. 2020 Urban Water Management Plan.

## UTILITIES AND SERVICE SYSTEMS

- **Policy PSF 2.2: Water Supply Planning.** Coordinate with Cal Water and Estero Municipal Improvement District upon each update of their respective Urban Water Management Plans to ensure there is an adequate and sustainable water supply for current and future development.
- **Policy PSF 2.3: Water Conservation.** Work with California Water Service, Estero Municipal Improvement District, Bay Area Water Supply Conservation Agency, and other mid-peninsula cities to support local, regional, and statewide water conservation efforts. Encourage all properties to convert to water-efficient landscaping.
- **Policy PSF 2.4: Water Supply for New Development.** Require applicants to provide will-serve letters from water purveyors prior to issuing building permits for new development to demonstrate that water supply is available.
- **Policy PSF 2.5: Water-Conserving Fixture Retrofits.** Require that all residences and commercial properties that apply for a building permit for alternations or renovations provide proof of water-conserving plumbing fixtures.
- **Policy PSF 2.6: Water Offset Requirements.** Require all new development or redevelopment projects to comply with the water conservation and offset policies and requirements imposed by California Water Service or Estero Municipal Improvement District, depending on the water service area in which the project is located.
- **Policy PSF 2.7: Water Shortage Plans.** Coordinate with California Water Service and Estero Municipal Improvement District to conduct community outreach and take other steps to ensure compliance with their Water Shortage Contingency Plans during water shortages, such as a drought or supply interruption.
- **Policy PSF 2.8: Water Efficiency.** Support increased water efficiency in all new development and existing building stock.
- **Action PSF 2.9: Recycled Water.** Continue working with California Water Service, the San Francisco Public Utilities Commission, the Bay Area Water Supply & Conservation Agency, the City of Redwood City, and Silicon Valley Clean Water to develop an advanced water purification facility that treats wastewater from the San Mateo wastewater treatment plant to tertiary treatment standards.
- **Action PSF 2.10: Water-Reduction Strategies.** Work with California Water Service, Estero Municipal Improvement District, Bay Area Water Supply & Conservation Agency, and other mid-peninsula cities to promote water-reduction strategies and to create an outreach program that will help inform residents and businesses of increased costs, the need for conservation efforts, and available incentives and rebates.
- **Action PSF 2.11: Water Purification Facility.** Continue working with California Water Service, the San Francisco Public Utilities Commission, the Bay Area Water Supply & Conservation Agency, the City of Redwood City, and Silicon Valley Clean Water to develop an advanced water purification facility that treats wastewater from the San Mateo wastewater treatment plan to tertiary treatment standards.
- **Action PSF 2.12: Water Usage.** Work with California Water Service to collect and track water use by land use type and make this information available to the community.



## UTILITIES AND SERVICE SYSTEMS

The City would continue to coordinate with Cal Water-MPS and EMID regarding conservation efforts, demand management measures promoted by the water districts, and implementation of water use restrictions as per the WSCPs. Additionally, future development under the proposed project would be required to implement the water-efficient requirements specified in the CALGreen and California Plumbing Codes and the WELO requirements for water efficient landscaping. Future projects under the proposed project that meet the criteria under California Water Code Section 10912 would be required to prepare a WSA that demonstrates that project water demands would not exceed water supplies. In addition, existing residential, commercial, and industrial land uses can be expected to decrease their water demands in the future as a result of the implementation of water conservation practices.

Compliance with implementation of Cal Water-MPS and EMID's WSCPs, compliance with the proposed General Plan goals, policies, and actions, compliance with WSA requirements, a requirement for will-serve letters for all new development projects, and compliance with existing water conservation regulations would reduce water demand with respect to water supplies. In addition, Cal Water, EMID, and SFPUC plan to have implemented alternative water supply programs by 2040. The Bay Delta Plan Amendment may not be enacted in its current structure, making more water available than anticipated in the most recent UWMPs.<sup>32</sup> The SFPUC has indicated that there will be sufficient supplies available to meet all demands of their water purveyors in both normal and drought conditions through the year 2040 if the Bay-Delta Plan is not implemented. The next iteration of Cal Water-MPS and EMID UWMPs, due in 2026, will reflect the population projections of the proposed General Plan and plan accordingly for future water supplies. Finally, compliance with the Cal Water-MPS Development Offset Program and EMID's Water Neutrality Ordinance would provide additional assurance that impacts to water supply would be less than significant. As the City of San Mateo is not a water provider for the EIR Study Area and has limited capacity to directly control water use and water supply planning, the measures described above represent the best water conservation and water supply measures available and the impact is *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>UTIL-2</b>	<b>The project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.</b>
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As noted in impact discussion UTIL-1, both Cal Water-MPS and EMID have sufficient water supplies available under normal years and would implement their WSCPs under single-year and multiple-year dry conditions. The WSCPs contain water demand mitigation measures that would be implemented at each of the six water shortage levels and each water agency is required to submit an annual report to DWR to assess whether there will be a water shortage in the coming year and what water demand reduction measures will be adopted to address the shortages. It also should be noted that the 2020 UWMPs assume full implementation of the Bay Delta Plan Amendment, which is in a state of flux and most likely would not result in the severe water restrictions that are currently projected. In addition, Cal Water-MPS, EMID, BAWSCA and SFPUC are working on alternative water supplies to address potential future water

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<sup>32</sup> San Francisco Public Utilities Commission, 2021. 2020 Urban Water Management Plan.

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shortages. Both water agencies that serve San Mateo and the SFPUC have an existing water distribution infrastructure that can supply the City without the need to expand their infrastructure facilities. Implementation of EMID's Water Neutrality Ordinance and the Cal Water-MPS Development Offset Program would provide assurance that future water demand would be offset by additional water supplies and expanded conservation programs.

In addition, each future proposed project under the proposed project would be required to demonstrate the availability of water to serve the development in the form of will-serve letters from the water purveyors or for larger projects, preparation of a WSA as required by Section 10910 of the California Water Code. As the City is almost entirely built out, most of the new development would be infill projects that are replacing buildings with an existing water demand and water distribution system. Therefore, implementation of the proposed project would not result in the need to construct additional water supply or distribution systems.

Cal Water-MPS and EMID purchase all of their water from SFPUC. The Harry Tracy Water Treatment Plant (HTWTP), which is owned and operated by SFPUC, filters and disinfects the water supplied from Crystal Springs Reservoir and San Andreas Reservoir before delivery to its wholesale customers on the Peninsula and its retail customers in the City of San Francisco. The Harry Tracy Water Treatment Plant was recently upgraded and features five new filters, three new ozone generators, and a new seismically resistant 11.5-million-gallon treated water reservoir. The facility now has the capacity to provide 140 MGD for 60 days within 24 hours of a major earthquake. This was part of SFPUC's WSIP to repair, replace, and seismically upgrade the Hetch Hetchy Regional Water System. As part of the upgrades, a new 78-inch treated water pipeline was installed to connect the HTWTP reservoir with the San Andreas Pipeline for delivery to SFPUC's customers.<sup>33</sup> Therefore, the SFPUC has the capability of supplying treated water to all of its wholesale and retail customers under existing and future conditions and no new water treatment facilities are required.

In summary, no new water treatment or distribution facilities would be needed with implementation of the proposed project and Cal Water-MPS and EMID has capital improvement projects to monitor and upgrade their water distribution systems to accommodate future development. In addition, compliance with the City's requirements for new construction, water-efficient landscaping, and compliance with the proposed General Plan goals, policies, and actions listed in impact discussion UTIL-1 would result in *less-than-significant* impacts with respect to the need for new and/or expanded water facilities.

**Significance without Mitigation:** Less than significant.

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<sup>33</sup> SFPUC, undated, The Harry Tracy Water Treatment Plant, <https://baywork.org/wp-content/uploads/2017/08/Harry-Tracy-Water-Treatment-Plant-fact-sheet-020817.pdf>, accessed May 25, 2023.

## UTILITIES AND SERVICE SYSTEMS

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UTIL-3	<b>The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to water supply.</b>
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The area considered for cumulative water supply impacts is the service areas of Cal Water-MPS MPD and EMID. Other future projects within these service areas would result in increases in water demand. However, cumulative water demands are not anticipated to require building new water treatment facilities or expansion of existing facilities beyond what is currently planned. All new development projects would be required to obtain will-serve letters from Cal Water-MPS and EMID and projects that meet the SB 610 criteria, such as residential projects with more than 500 dwelling units, would be required to prepare WSAs. The City and the water purveyors would review such projects for adequacy of water supply and the water purveyors would update the UWMP every five years to ensure that there are adequate water supplies and contingency plans for future residents and customers. All new development under the proposed project would require implementing water efficiency and water conservation measures, as per the CALGreen Building Code and the WELO irrigation requirements. Water supply deficits in dry years would be met by implementing the WSCPs and other water conservation efforts.

All cumulative projects would require compliance with City ordinances and proposed General Plan goals, policies, and actions, as well as local, State, and federal regulatory requirements. These regulations, and enactment of the pending water neutrality ordinances, would result in a reduction in per capita water use over time, which would ensure that cumulative impacts with respect to water supply would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.17.2 WASTEWATER

#### 4.17.2.1 ENVIRONMENTAL SETTING

##### Regulatory Setting

###### *Federal Regulations*

###### Clean Water Act

The Clean Water Act regulates the discharge of pollutants into watersheds throughout the nation. Under the CWA, the USEPA implements pollution control programs, sets wastewater standards, and makes it unlawful to discharge pollutants from a point source into any navigable waters without obtaining a permit. Point sources include any conveyances, such as pipes and man-made drainage channels, from which pollutants may be discharged.

###### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES

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permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; set prohibitions on discharges not specifically allowed under the permit; and establish provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

### *State Regulations*

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) and a monitoring and reporting program (Order No. WQ-2013-0058-EXEC) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipes. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan (SSMP). The General Waste Discharge Requirement also requires that SSOs be reported to the SWRCB using an online reporting system. The SWRCB has delegated authority to the nine RWQCBs to enforce these requirements within their regions.

The SSMP evaluates existing sewer collection systems and provides a framework for minimizing the frequency and impact of SSOs. The SSMP includes an overflow emergency response plan; a fats, oil, and grease control program; scheduled inspections and condition assessment; design and construction standards; capacity assessment and management; and a monitoring program.

### *Regional Regulations*

The San Francisco Bay RWQCB (Region 2) was created as a result of the California Porter-Cologne Act. The RWQCB issues and enforces NPDES permits within the EIR Study Area, which includes permits for wastewater treatment plants (WWTPs) and industrial waste discharges. NPDES permits allow the RWQCB to regulate where and how waste is disposed, including the discharge volume and effluent limits of waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

### *Local Regulations*

#### San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to wastewater are primarily in the Public Services and Facilities Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to mitigate adverse impacts to wastewater later in this chapter under Section 4.17.2.3, *Impact Discussion*.

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### City of San Mateo Municipal Code

The SMMC includes various directives pertaining to wastewater. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to wastewater impacts are included in Title 3, *Taxation and Finance*, Title 7, *Health, Sanitation, and Public Nuisances*, and Title 23, *Buildings and Construction*.

- Chapter 3.54, *Sewer Service Charges and Connection Fees*. These fees are imposed upon the owners of every parcel of land within the city that is served by the City's sanitary sewer system and wastewater treatment plant. The fees are part of the annual property tax bill, which funds costs associated with providing sanitary sewer and wastewater treatment services, including required new or expanded construction projects, maintenance, and operation.
- Chapter 7.38, *Sanitary Sewer Use*, incorporates the City of San Mateo Sanitary Sewer Use Ordinance. The chapter sets requirements for users of wastewater collection, treatment, and disposal facilities operated and administered by the City and EMID. Compliance would prevent the discharge of any pollutant into the sanitary sewer system, which would: (1) obstruct or damage the collection system; (2) interfere with, inhibit or disrupt wastewater treatment processes or operations, or limit sludge reuse or disposal options; (3) pass through the treatment system and contribute to violations of the regulatory requirements placed upon the City of San Mateo Wastewater Treatment Plant (WWTP); or (4) result in or threaten harm to human health or the environment.

A wastewater capacity charge is imposed on all new development to recover a proportionate share of costs for existing and future wastewater system facilities and new or expanded connections to the City's wastewater systems. The applicable charges are determined by land use, wastewater flow rates, and wastewater strength loadings.

Section 7.32.432 provides requirements for compliance with the Private Sewer Lateral Ordinance, which was passed in 2020. Upon the sale of real property, property improvements greater than \$90,000, sewer class change, or sewer later backup or blockage, a sewer lateral inspection is required.

Industrial waste may require pretreatment prior to discharge to the City's sewer system, as determined by the Public Works Department. Pretreatment may include gravity separation interceptors, grease removal for food service facilities, closed-loop recycling systems for steam cleaning and radiator flushing, electrolytic recovery units for photo process waste and devices to capture amalgam for dental clinics. Applicants must submit an application to the Public Works Department to obtain a permit to discharge industrial waste. Permit applications for construction dewatering are also required.

- Chapter 23.16, *Plumbing Code*, adopts the 2022 California Plumbing Code, California Code of Regulations, Title 25, Part 5, which includes a chapter on sanitary drainage connections and standards of construction.

### City of San Mateo NPDES Permit for Wastewater Treatment Plant

The San Francisco Bay RWQCB issued a NPDES permit and waste discharge requirements in 2018 for San Mateo's Wastewater Treatment Plant (WWTP) and its collection system (Order No. R2-2018-0016). The dischargers are listed as the City of San Mateo and the City of Foster City EMID. EMID also discharges its

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collected wastewater to San Mateo's WWTP as well as four satellite collection systems: the City of Belmont, Crystal Springs Community Sanitation District (CSCSD), the Town of Hillsborough, and County of San Mateo Tower Road Complex. The order contains discharge limitations on specific pollutants discharged to Lower San Francisco Bay as well as monitoring and reporting requirements. The WWTP is permitted for an average daily dry weather flow of 15.7 MGD.<sup>34</sup> The current NPDES permit expires on June 30, 2023.

### City of San Mateo Sewer System Management Plan

The latest Sewer System Management Plan is dated 2020.<sup>35</sup> The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system in order to minimize the number of SSOs and mitigate any SSOs that do occur. As required by law, the SSMP must be updated every five years and must be developed in compliance with the requirements of the SWRCB Waste Discharge Requirements Order No. 2006-003-DWQ, Amended Monitoring and Reporting Program (MRP) Order No. WQ 2008-002-EXEC, and Order No. WQ 2013-0058-EXEC.

### San Mateo Clean Water Program

The Clean Water Program is a comprehensive plan to upgrade the aging wastewater collection and treatment system with advanced infrastructure that will provide reliable service for years to come. The Final Programmatic Environmental Impact Report was certified and adopted by City Council in May 2016.<sup>36</sup> The \$1 billion Clean Water Program was launched in 2015 in response to a Cease-and-Desist Order from the RWQCB issued jointly to the City of San Mateo, the Town of Hillsborough, and the CSCSD to eliminate SSOs in the respective collection systems and requiring specific corrective actions. Primary objectives of the Clean Water Program are to replace aging infrastructure and facilities that are reaching their lifespan of 50 to 60 years; meet current and future regulatory requirements regarding SSOs and infiltration/inflow reductions; increase the peak wet weather capacity of the WWTP; and meet the City's sustainability goals regarding more efficient use of energy and recycled water.

### San Mateo Integrated Wastewater Master Plan

The 2014 Integrated Wastewater Master Plan was developed in response to the reissuance of the NPDES permit for the WWTP in 2013 requiring a more integrated approach for addressing the City's collection system and WWTP. The permit called for development of WWTP and Collection System Master Plans, Capital Improvement Programs (CIPs), and a Wet Weather Improvement Program. The Integrated Wastewater Master Plan was developed in response to those requirements and addresses the needs

<sup>34</sup> San Francisco RWQCB, 2018, Order No. R2-2018-0016, Waste Discharge Requirements for City of San Mateo Wastewater Treatment Plant and its collection system.

<sup>35</sup> City of San Mateo, updated December 2020, *Sewer System Management Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices>, accessed May 25, 2023.

<sup>36</sup> City of San Mateo, Public Works Department, and City of Foster City, 2019, *Environmental Impact/Permitting – Final PEIR*, <https://cleanwaterprogramsanmateo.org/peir/>, accessed May 24, 2023.



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through 2035 for the City's collection system and WWTP to deal with wet and dry weather flows. The Integrated Wastewater Master Plan considers the following elements:

- Provide adequate capacity to convey and treat the projected flows in the system.
- Resolve existing conditions and treatment concerns.
- Meet current regulatory requirements regarding SSOs and infiltration and inflow (I/I) reduction.
- Meet anticipated future regulatory requirements.
- Meet the City's sustainability objectives including more efficient use of energy and recycled water.
- Plan for expansion of the WWTP considering space limitations of the site.
- Balance improvements between collection/conveyance, treatment, and storage to find the most efficient method to handle wet weather flows.

### San Mateo Sewer Design Standards

The construction of sewer collection systems within the City's service area shall conform to the City's requirements per Appendix 5.1 of the SSMP, Element 5, Design and Performance Provisions.<sup>37</sup> The design standards require calculations for design flows and pipe capacities, minimum slopes of collector lines, laterals, and manhole spacings. The City also has standard sewer details and drawings issued by the Public Works Department.<sup>38</sup>

## Existing Conditions

### *Wastewater Treatment*

The San Mateo WWTP is owned by the City of San Mateo (approximately 75 percent ownership) and the City of Foster City/EMID (approximately 25 percent ownership) and has been in operation since 1935.<sup>39</sup> A 2017 Joint Powers Agreement (JPA) between the City of San Mateo and City of Foster City/EMID establishes the capacity, ownership, and cost distribution to the parties. As the administering agency of the JPA, the City of San Mateo operates the WWTP. The WWTP is located at 2050 Detroit Drive in San Mateo and provides secondary treatment of domestic, commercial, and industrial wastewater for the cities of San Mateo and Foster City, Crystal Springs County Sanitation District, and portions of the Town of Hillsborough, the City of Belmont, and unincorporated San Mateo County.

The City of San Mateo and Foster City/EMID maintain their own sewer collection systems. The neighboring agencies are responsible for the ownership and maintenance of their sanitary collection systems and pay for the sanitary flows that are discharged into the City's collection system for conveyance and treatment at the WWTP. The current population within the entire WWTP service area is estimated to

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<sup>37</sup> City of San Mateo, 2020, Sewer System Management Plan, Appendix 5.1, Element 5, Design and Performance Provisions.

<sup>38</sup> City of San Mateo, 2023, *Sanitary Sewer Details and Appurtenances*, <https://www.cityofsanmateo.org/2081/Standard-Drawings>, accessed May 24, 2023.

<sup>39</sup> City of San Mateo, updated December 2020, *Sewer System Management Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices>, accessed May 26, 2023.

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be approximately 170,000.<sup>40</sup> The sanitary sewer collection systems that contribute wastewater to the WWTP and the location of the WWTP are shown on Figure 4.17-2, *Sanitary Sewer Service Area Boundaries and WWTP Location*.

The WWTP was built in 1935 and is presently in the process of a major modernization, expansion, and upgrade project. The facility is currently permitted for a discharge of 15.7 MGD as an average daily dry weather flow. The amount of wastewater discharged to the WWTP was approximately 10 MGD in 2020.<sup>41</sup> The current treatment process consists of primary clarification, activated sludge aeration, secondary clarification, and sodium hypochlorite disinfection. During wet weather conditions, the primary treatment capacity is 60 MGD and the secondary treatment capacity is 40 MGD. Currently, when influent exceeds the WWTP's wet weather design capacity of 40 MGD, a portion of the wastewater from the primary clarifier is routed directly to the chlorine disinfection tank (bypassing secondary treatment) and blended with secondary treated wastewater prior to discharge. The expansion and upgrade of the WWTP will eliminate this blending process, as per RWQCB requirements.

The WWTP Upgrade and Expansion Project involves the construction of new liquid treatment facilities, including headworks, primary treatment, five-stage biological nutrient removal/membrane bioreactor process, biological and chemically enhanced treatment process, and odor control facilities. Once the expansion project is completed, the WWTP will be able to provide secondary treatment for all wet weather flows and eliminate blending. The new facilities will be able to treat flows of up to 21 MGD for dry weather conditions and up to 78 MGD for peak wet weather flows, with the ability to store wastewater in an onsite equalization basin.<sup>42</sup>

### *Wastewater Collection*

The City of San Mateo's sewer collection system consists of 230 miles of sewer pipes, ranging in diameter from 4 inches to 48 inches, and approximately 5,800 manholes. Approximately 74 percent of the sewer pipes were installed prior to 1960 and are predominantly vitrified clay pipe (VCP). There also are 27 pump stations and 11 miles of force mains, which are located primarily in the eastern (flatter) half of the City to assist in the conveyance of wastewater to the WWTP.<sup>43</sup> This system is maintained by the City's Public Works Department, Environmental Services Division. Wastewater is conveyed to the City's WWTP, where the effluent is treated and eventually discharged via a 54-inch outfall into Lower San Francisco Bay. Figure 4.17-3, *City of San Mateo Sewer Collection System*, shows the location of the sewer pipelines and pump stations.

<sup>40</sup> City of San Mateo, updated December 2020, *Sewer System Management Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices>, accessed May 24, 2023.

<sup>41</sup> Correspondence with Azalea Mitch, 2023, Director of Public Works.

<sup>42</sup> San Mateo/EMID WWTP, 2017. Special Use Permit Formal Application. Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion Project.

<sup>43</sup> City of San Mateo, updated December 2020, *Sewer System Management Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices>, accessed May 26, 2023.

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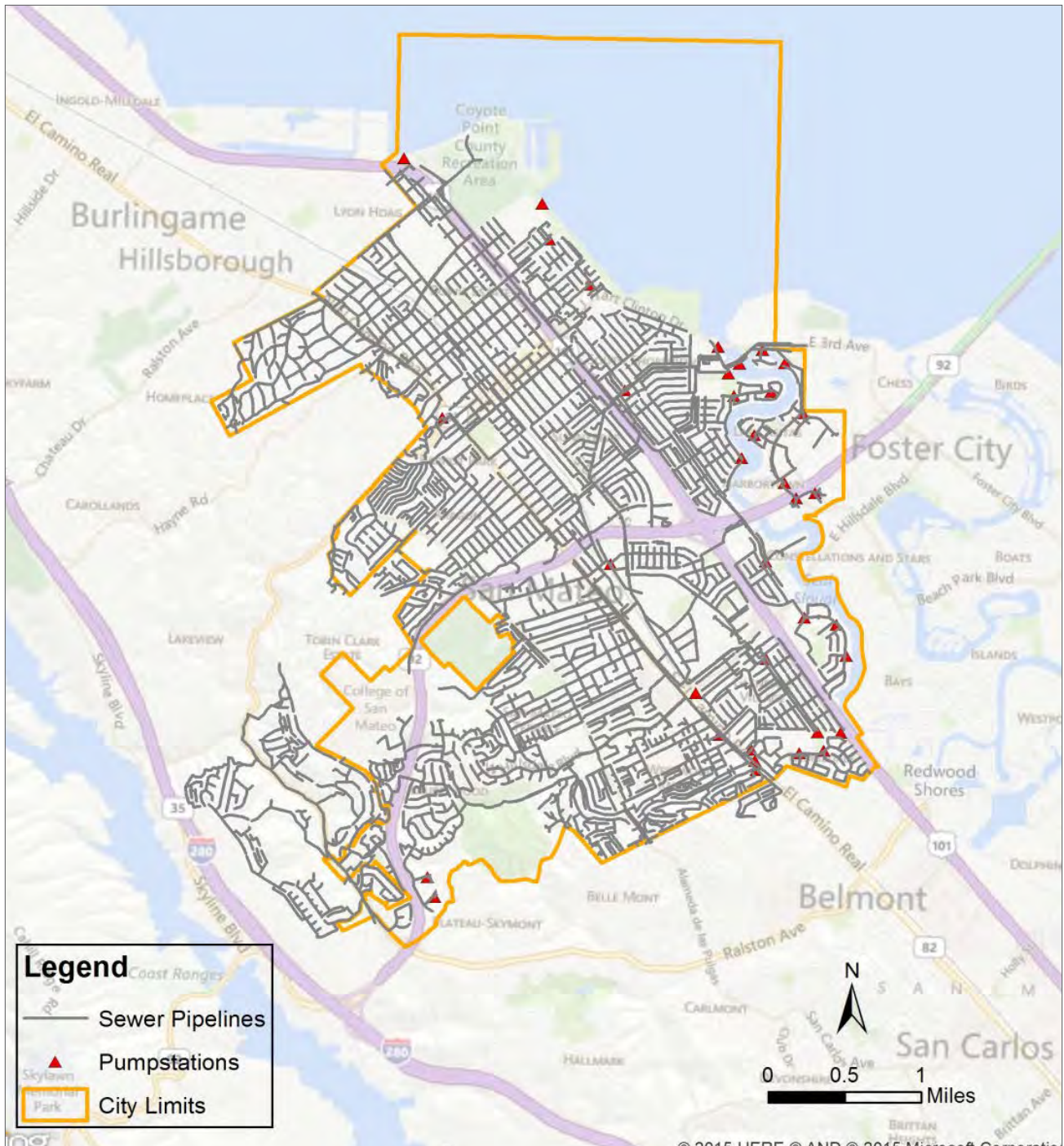
Source: City of San Mateo Sewer System Management Plan, 2020.



Figure 4.17-2  
Sanitary Sewer Service Area Boundaries and WWTP Location



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Source: City of San Mateo Sewer System Management Plan, 2020.



Figure 4.17-3  
City of San Mateo Sewer Collection System

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The City plans to upgrade the aging infrastructure as outlined in the Sewer System Management Plan<sup>44</sup>, Integrated Wastewater Master Plan,<sup>45</sup> and San Mateo's Clean Water Program.<sup>46</sup> The existing collection system constructed with aging vitrified clay pipes allows the inflow and infiltration of groundwater and stormwater into the system during wet weather events. When the collection system's capacity is exceeded due to these inflows, the wastewater surfaces and flows out of manholes, resulting in SSOs. Upgrades at the WWTP and the collection system's pipes and pump stations will provide additional capacity to reduce the occurrence of SSOs. Completed projects include the following:<sup>47</sup>

- Basin 2&3 Pipe Capacity Improvements – Pacific Boulevard Force Main Project
- 42<sup>nd</sup> Avenue Pump Station Improvements
- Glendora/Shasta Pipe Capacity Improvements
- Basin 1a Pipe Capacity Improvements
- Basin 1b Pipe Capacity Improvements
- Laurie Meadows and Woodbridge Pump Station Improvements
- 38<sup>th</sup> Avenue and 41<sup>st</sup> Avenue Pump Station Improvements
- El Camino Real Sewer Rehabilitation

Near-term sewer improvements include the following:<sup>48</sup>

- Dale Avenue Pump Station Improvements
- Basin 2&3 Pipe Capacity Improvements – Delaware Street Relief Sewer Project
- El Camino Real Sewer Conveyance System Improvements
- A Basin (North Basin) Sewer Rehabilitation
- B Basin (West Basin) Sewer Rehabilitation
- C Basin (East Basin) Sewer Rehabilitation
- D Basin (Central Basin) Sewer Rehabilitation
- E Basin (South Basin) Sewer Rehabilitation
- Kehoe-Kelly and Los Prados (1,2, and 3) Pump Station Improvements.

Once upgrades to the WWTP have been completed, there will be an option of producing disinfected tertiary-treated recycled water for landscape irrigation and/or for regional potable reuse opportunities (e.g., installing a pipeline from the WWTP to SFPUC's Lower Crysall Springs Reservoir).

The southern portion of the Town of Hillsborough, CSCSD, and San Mateo County's Tower Road complex also discharge wastewater into San Mateo's sewer collection system. The wastewater flows from the Town

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<sup>44</sup> City of San Mateo, updated December 2020, *Sewer System Management Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/83281/Final-City-of-San-Mateo-2021-SSMP-122920-w-Appendices>, accessed May 26, 2023.

<sup>45</sup> City of San Mateo, Estero Municipal Improvement District, October 2014, *Integrated Wastewater 20-Year Master Plan*, <https://www.cityofsanmateo.org/DocumentCenter/View/47508/Appendix-83-System-Evaluation-and-Capacity-Assurance-Plan---Integrated-WW-MP-Exec-Sum?bidId=>, accessed May 26, 2023.

<sup>46</sup> City of San Mateo, Public Works Department, and City of Foster City, 2019, *Clean Water Program San Mateo*, <https://cleanwaterprogramsanmateo.org/>, accessed May 26, 2023.

<sup>47</sup> City of San Mateo, 2023, *Sewer Improvement Projects*, <https://cleanwaterprogramsanmateo.org/construction-projects/>, accessed May 26, 2023.

<sup>48</sup> City of San Mateo, 2023, *Sewer Improvement Projects*, <https://cleanwaterprogramsanmateo.org/construction-projects/>, accessed May 26, 2023.

## UTILITIES AND SERVICE SYSTEMS

of Hillsborough is conveyed by the Crystal Springs/El Cerrito trunk sewer and enters San Mateo's sewer collection system at El Cerrito Avenue, where it is conveyed to the Dale Avenue Pump Station and then into the San Mateo WWTP.<sup>49</sup> The wastewater collected by CSCSD flows through the Polhemus Trunk Sewer and eventually is discharged into the Dale Avenue Pump Station. The San Mateo County Tower Road complex also discharges wastewater into the Polhemus Trunk Sewer. The Town of Hillsborough and CSCSD, as well as San Mateo, are part of the Cease-and-Desist Order from the RWQCB as a result of SSOs and have been required to perform sewer system flow monitoring, completed sewer capacity assessments, and develop capacity assurance plans.

### 4.17.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would have a significant impact related to wastewater service if it would:

- Require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects.
- Result in a determination by the wastewater treatment provider which serves or may serve the proposed project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wastewater.

### 4.17.2.3 IMPACT DISCUSSION

<b>UTIL-4</b>	<b>The project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects.</b>
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Buildout of the proposed project would result in an increase in wastewater with the addition of 21,410 new housing units and 4,325,200 new square feet of non-residential land use. However, as discussed below, future demands from the increased population and land use changes from implementation of the proposed project would not exceed the permitted capacity of the City's WWTP. Other sanitation districts that discharge to the WWTP are also considered in this analysis.

For areas within the City Limits, wastewater generated by the proposed project would be collected by the City's sanitary sewer system and conveyed to the WWTP. EMID maintains its own sewer collection system, which sends wastewater directly to the WWTP. In addition, wastewater from portions of the Town of Hillsborough, CSCSD, and the San Mateo County Tower Road complex connect to San Mateo's sewer collection system and eventually are treated at the WWTP.

<sup>49</sup> Town of Hillsborough, 2011. Wastewater Collection System Master Plan for San Mateo (South) Sewershed. [https://www.hillsborough.net/DocumentCenter/View/4704/1-Wastewater-Collection-System-Master-Plan-for-San-Mateo-South-Sewershed\\_September-2011?bidId=](https://www.hillsborough.net/DocumentCenter/View/4704/1-Wastewater-Collection-System-Master-Plan-for-San-Mateo-South-Sewershed_September-2011?bidId=) accessed on May 26, 2023.



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An estimate of the amount of additional wastewater generated by the proposed project was determined, as shown in Table 4.17-9, *Wastewater Demand Increase: Proposed Project*. The wastewater demand factors were derived assuming that 90 percent of the total water demand consisted of indoor water use and that 95 percent of the indoor water use resulted in wastewater. These wastewater demand factors differ from the factors presented in the City’s 2014 Wastewater Master Plan due to updated information on water demands provided by Cal Water-MPS and EMID.

**TABLE 4.17-9 WASTEWATER DEMAND INCREASE: PROPOSED PROJECT**

Category	Increase in Water Demand (AFY)	Increase in Water Demand (GPD)	Increase in Wastewater Demand (GPD) <sup>a</sup>
EMID Service Area	330	294,604	251,887
Cal Water-MPS Service Area	2,311	2,063,122	1,763,969
<b>Total</b>			<b>2,015,856</b>

Notes:

a. Assumes 90 percent of total water demand is indoor water and that 95 percent of indoor water becomes wastewater.

Sources: Estero Municipal Improvement District, 2021, 2020 UWMP; Cal Water MPS, 2021, 2020 UWMP; PlaceWorks, 2023.

The increase in wastewater demand with buildout of the proposed project is estimated to be approximately 2.0 MGD. Combined with the existing average daily flow of 10 MGD, the estimated total wastewater discharge from the City of San Mateo in 2040 is estimated to be 12 MGD. This calculation is conservative because it assumes that 90 percent of the total water demand is indoor water of which 95 percent becomes wastewater, although indoor water demand is typically only 75 percent of the total water demand.<sup>50</sup>

In addition to the City, there are other agencies that discharge wastewater to the San Mateo WWTP, including Foster City, CSCSD, and Hillsborough. Wastewater from unincorporated San Mateo County and Belmont are small and insignificant proportions of the wastewater flows to the WWTP.<sup>51</sup> The San Mateo Tower Road complex that discharges to the WWTP consists primarily of County offices and facilities (library, garden, juvenile court, fire station, etc.) and it is not anticipated that there would be any increase in population in this area. For the increase in wastewater from Foster City, the net increase in water demand of 504 AFY by 2040 from the Foster City/EMID Water Capacity study was used and converted to an equivalent wastewater flow, conservatively assuming that 90 percent of the total water demand is indoor water of which 95 percent becomes wastewater.

For the increase in wastewater flows from the Town of Hillsborough, a one percent increase in flow rates was assumed. Only the southern portion of the Town of Hillsborough conveys wastewater to San Mateo’s WWTP and the ABAG projections from 2020 to 2040 assume an increase in population of only 105 people. This would be approximately a one percent increase in population. CSCSD serves the Highlands area of San Mateo County. There has been a 9 percent decrease in population in this area since 2000 and the CSCSD is requiring new construction to have “no net increase” in wastewater flows and the payment of impact fees for inflow and infiltration improvements to the existing sewer system to ensure a net zero

<sup>50</sup> EMID, 2021. 2020 Urban Water Management Plan.

<sup>51</sup> Correspondence with Azalea Mitch, Director of Public Works, City of San Mateo on May 26, 2023.

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increase during wet weather events.<sup>52</sup> Nevertheless, it also was assumed that there would be a one percent increase in wastewater flows from CSCSD. The existing and projected wastewater flows to the San Mateo WWTP are provided in Table 4.17-10, *Wastewater Flows to San Mateo WWTP in 2040*.

**TABLE 4.17-10 WASTEWATER FLOWS TO SAN MATEO WWTP IN 2040**

Discharger	2020 Existing Wastewater Flows (MGD)	Increase in Wastewater Flows (MGD)	2040 Total Wastewater Flows (MGD)
City of San Mateo	10	2	12
Foster City/EMID	2.2	0.4 <sup>a</sup>	2.6
CSCSD	0.3	0.003 <sup>b</sup>	0.3
Hillsborough	1.4	0.014 <sup>b</sup>	1.4
<b>Total</b>	<b>13.9</b>	<b>2.4</b>	<b>16.3</b>

Notes:

a. From Foster City/EMID Water Capacity Study, assumes an increase in water demand of 504 AFY converted to 449,941 gpd of which 90% is indoor water and 95% of the indoor water becomes wastewater for a total wastewater flow of 384,700 gpd.

b. For CSCSD and Hillsborough, assume a 1% increase in wastewater flows between 2020 and 2040.

Sources: EMID, 2021, 2020 UWMP; Cal Water MPS, 2021, 2020 UWMP; PlaceWorks, 2023.

The average daily wastewater flows to the WWTP in 2040 are estimated to be 16.3 MGD. Currently, the WWTP is permitted for an average daily flow rate of 15.7 MGD. However, the WWTP is in the process of undergoing a major expansion that is estimated to be completed in 2025. Upon completion, the WWTP will be designed for average daily flow rates of 21 MGD and wet weather storm inflows of up to 78 MGD. Therefore, the WWTP will be able to accommodate the future wastewater flows from San Mateo and the other sewer districts that discharge to the WWTP. In addition, the assumptions used in calculating future wastewater flow are conservative (i.e., they represent a “worst case scenario”), as wastewater flows to WWTPs continue to decline with water conservation efforts.<sup>53</sup>

In conjunction with the upgrade and expansion of the WWTP, the City of San Mateo is also implementing sewer collection improvement projects as part of the Clean Water Program. The goal is to upgrade the aging sewer infrastructure, improve wet weather capacity, and reduce inflow and infiltration (I/I) by replacing existing sewers with larger pipes and rehabilitation/lining of existing sewer lines. A list of the planned and completed sewer improvement projects is provided in the *Wastewater Collection* section above. The Clean Water Program was launched in 2015 to modernize the WWTP and sewer collection system with expenditures of \$1 billion over a 10-year period. Completion of the WWTP and sewer system upgrades should minimize the potential for future SSOs and would be able to accommodate the increases in wastewater flows with buildout under the proposed project.

In addition, a wastewater capacity charge is imposed on all new development to recover a proportionate share of costs for existing and future wastewater system facilities and new or expanded connections to the City’s wastewater systems. Also, property owners are required to pay an annual sewer service charge

<sup>52</sup> SWCA Environmental Consultants, 2021, Highland Estates Subdivision Project, Addendum to the Highland Estates Final Environmental Impact Report. Dated May 2021.

<sup>53</sup> California Water Environment Association, 2023, Dealing with Declining Wastewater Flows, <https://www.cwea.org/news/dealing-with-declining-flows/> accessed on July 6, 2023.

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as part of the annual property tax bill. These collected fees are used to fund wastewater collection and treatment system improvements designated in the CIP and Clean Water Program.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider impacts to wastewater collection systems and treatment facilities. The following General Plan 2040 goal, policies, and action would serve to minimize potential adverse impacts to wastewater infrastructure with future development:

- **Goal PSF-3:** Maintain sewer, storm drainage, and flood-control facilities adequate to serve existing needs, projected population, and employment growth and that provide protection from climate change risk.
  - **Policy PSF 3.1: Sewer System.** Provide a sewer system that safely and efficiently conveys sewage to the wastewater treatment plant. Implement the Sewer System Management Plan to ensure proper maintenance, operations, and management of all parts of the wastewater collection system.
  - **Policy PSF 3.2: Sewer Requirements for New Development.** Require new multifamily and commercial developments to evaluate the main sewer lines in the project vicinity, which will be used by the new development and make any improvements necessary to convey the additional sewage flows.
  - **Policy PSF 3.3: Sewer Overflow Reduction.** Eliminate sanitary sewer overflows, which create a public health hazard for residents and compromises the water quality of the city's creeks, Marina Lagoon, and San Francisco Bay.
  - **Policy PSF 3.4: Wastewater Treatment Plant.** Operate, upgrade, and maintain the Wastewater Treatment Plant to ensure ongoing wastewater treatment in compliance with regulatory requirements.
  - **Policy PSF 3.5: Inter-Agency Coordination for Wastewater Planning.** Coordinate future planning of the sewer collection and wastewater treatment plant with the other users of the systems, including the Estero Municipal Improvement District (City of Foster City), the Crystal Springs County Sanitation District, Town of Hillsborough, and City of Belmont.
  - **Action PSF 3.13: City Infrastructure Studies and Master Plans.** Develop and coordinate studies and master plans to assess infrastructure and to develop a Capital Improvement Program for necessary improvements. Incorporate climate change risks, such as the impacts of droughts, increasing storm events, sea level rise, and groundwater changes in the planning process.

Implementation of the proposed project would not require the construction or expansion of the San Mateo WWTP or sewer collection system beyond what is already planned or under construction. Adherence to the City's municipal code requirements as well as the proposed General Plan goal, policies, and action would reduce wastewater generation rates over time, and therefore impacts associated with the sewer collection and treatment systems would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>UTIL-5</b>	<b>The project would not result in a determination by the wastewater treatment provider which serves or may serve the proposed project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.</b>
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As described in impact discussion UTIL-4, the City's WWTP is currently permitted to treat up to 15.7 MGD and upon completion of the upgrade and expansion project, which is scheduled for completion in 2025, will be able to treat up to 21 MGD. The increase in wastewater demand from 2020 to 2040 is estimated to be 2.4 MGD, as shown in Table 4.17-10, which would result in a total treatment capacity of 16.3 MGD in 2040.

The estimated increase in wastewater flows is conservative because the City has observed declining average flow rates over time. Also, the wastewater demand factors are conservative and assume that 90 percent of the total water demand is indoor water and 95 percent of the indoor water becomes wastewater. New projects within the EIR Study Area would also be required to comply with the latest CALGreen and California Plumbing codes and implement active and passive water conservation measures. This would reduce wastewater discharge rates below that which was calculated in Table 4.17-10. Furthermore, potential future development pursuant to the proposed project would undergo City review and be required to comply with the proposed General Plan goal, policies, and action listed in impact discussion UTIL-4.

With continued compliance with applicable regulations, wastewater generated by the proposed project would not exceed the capacity of the City's WWTP once the expansion project is completed. Also, the proposed General Plan goal, policies, and action listed in impact discussion UTIL-4 would ensure that potential future development would minimize impacts to wastewater collection and treatment capacity. Therefore, the proposed project would not result in a determination by the wastewater treatment provider that there is not adequate capacity to serve the EIR Study Area's projected demand in addition to the demands of other wastewater dischargers. Therefore, the impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>UTIL-6</b>	<b>The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to wastewater.</b>
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The context used for the cumulative assessment is the service area of San Mateo's WWTP. In addition to wastewater discharged to the WWTP by the City, there are other dischargers, including Foster City, CSCSD, the Town of Hillsborough, and a small area of unincorporated San Mateo County.

As discussed in impact discussion UTIL-4, the existing and future wastewater flows to the City's WWTP were calculated for all dischargers, as shown in Table 4.17-10. With completion of the WWTP expansion project in 2025, the WWTP would have the capacity to treat 21 MGD and would still have a residual average annual dry weather capacity of 4.7 MGD.

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Also, under the Clean Water Program, the City has committed to spend \$1 billion for improvements to the WWTP and sewer collection system. The other dischargers to the WWTP also have sewer collection system improvement programs. Future development within the city would require compliance with all applicable regulations and ordinances. Project applicants would have to pay wastewater capacity charges and property owners are required to pay an annual sewer service charge, which funds continued improvements to the wastewater collection and treatment system. The other dischargers to the WWTP have similar sewer collection system improvement programs.

Therefore, with continued compliance with applicable regulations and future reductions in wastewater demands with water conservative efforts, cumulative development would not exceed wastewater collection or treatment capacities. Accordingly, the proposed project would not result in a cumulatively considerable impact related to wastewater, and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.17.3 SOLID WASTE

#### 4.17.3.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *Federal Regulations*

The Resource Conservation and Recovery Act of 1976 (Title 40 of the Code of Federal Regulations), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

###### *State Regulations*

###### Integrated Waste Management Act

California's Integrated Waste Management Act of 1989 (AB 939) requires that cities and counties divert 50 percent of all solid waste from landfills as of January 1, 2000 through source reduction, recycling, and composting. This act requires that each city and county prepare a Source Reduction and Recycling Element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle), a department within the California Natural Resources Agency. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is calculated as a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate.

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### Mandatory Commercial Recycling Act (AB 341)

Assembly Bill 341 (Chapter 476) increases the statewide waste diversion goal to 75 percent by 2020, and mandates recycling for businesses producing four or more cubic yards of solid waste per week or multi-family residential dwellings of five or more units. AB 341 is designed to reduce greenhouse gas (GHG) emissions in the state by 5 million metric tons of carbon dioxide equivalents. In San Mateo County, businesses and property owners can subscribe to composting and recycling services provided by Recology San Mateo County.

### Mandatory Organics Recycling Act (AB 1826)

AB 1826, which was enacted in 2014, mandates organic waste recycling for businesses and multifamily dwellings with five or more units. Starting January 1, 2020, all generators of 2 cubic yards or more of garbage, recycling, and compost combined per week must recycle organic waste. Organic waste includes food scraps, food-soiled paper waste, yard trimmings, and landscape materials. Organic waste can be recycled through composting, mulching, and anaerobic digestion which produces renewable energy and fuel. In addition to recycling food scraps, donating surplus food to local food banks can be part of the AB 1826 compliance effort. Multi-family dwellings do not need to have food-waste recycling on-site but must recycle yard and landscape materials. Recology San Mateo County offers these services to businesses and residences to comply with the requirements of AB 1826.

### California Short-Lived Climate Pollutants Act (Senate Bill 1383)

SB 1383 focuses on the elimination of methane gas created by organic materials in landfills and set targets to achieve a 50 percent reduction in the statewide disposal of organic waste by 2020 and a 75 percent reduction by 2025. Organic waste makes up half of what Californians send to landfills. SB 1383 requires all businesses and residents to divert organic materials (including food waste, yard waste, and soiled paper products) from the landfill. The regulation took effect on January 1, 2022 and will require that organics collection service be provided to all residents and businesses. Also, an edible food recovery program must be established by 2025 with the goal of recovering edible food for human consumption.<sup>54</sup>

### California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires development projects to set aside areas for collecting and loading recyclable materials. The Act required CalRecycle to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model, or an ordinance of their own, governing adequate areas in development projects for collection and loading of recyclable materials.

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<sup>54</sup> CalRecycle, 2021, SB 1383 Education and Outreach Resources, <https://www.calrecycle.ca.gov/organics/slcp/education>, accessed May 30, 2023.



## UTILITIES AND SERVICE SYSTEMS

### CALGreen Building Code

The latest 2022 California Green Building Standards Code (CALGreen Code) became effective on January 1, 2023. Section 5.408, *Construction Waste Reduction Disposal and Recycling*, mandates that, in the absence of a more stringent local ordinance, a minimum of 65 percent of non-hazardous construction and demolition debris must be recycled or salvaged. The Code requires applicants to prepare and submit a Construction and Demolition Recycling & Waste Reduction Plan, which is submitted to the City for approval. for on-site sorting of construction debris, which is submitted to the City for approval. The plan must:

- Identify the materials to be diverted from disposal by recycling, reuse on the project, or salvage for future use or sale.
- Specify if materials will be sorted on-site or mixed for transportation to a diversion facility.
- Identify the diversion facility where the material collected will be taken.
- Supply weight tags for the entire period of the project for compliance review.

### *Regional Agencies*

#### San Mateo County Environmental Health Division

San Mateo County Environmental Health Division (SMCEHD) is the State-certified Local Enforcement Agency for solid waste in San Mateo County. The Solid Waste Program under the SMCEHD ensures that businesses, garbage collection and disposal companies, and residents follow the federal, State, and local standards and permitting requirements for solid waste. Inspectors from the Solid Waste Program issue permits and inspect four transfer/material recovery facilities and one anaerobic digestion facility, as well as one active landfill, Ox Mountain, in Half Moon Bay.<sup>55</sup> These facilities are monitored for compliance with State standards for the proper handling and disposal of solid waste. Seventeen closed landfills in different locations throughout the County are also monitored.

#### San Mateo County Office of Sustainability: Solid Waste Management

San Mateo County Office of Sustainability: Solid Waste Management administers and implements the solid waste management and resource conservation programs and policies throughout the County. The Waste Reduction Program's mission is to advance environmental sustainability by working with residents, businesses, and institutions throughout San Mateo County to encourage environmental stewardship, implement resource conservation programs and policies, and ensure compliance with the California solid waste regulations.<sup>56</sup>

#### RethinkWaste (South Bayside Waste Management Authority)

RethinkWaste, also known as the South Bayside Waste Management Authority, is a joint powers authority formed by eleven local jurisdictions (Member Agencies) within San Mateo County, including the City of

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<sup>55</sup> San Mateo County Health, 2023, Solid Waste Program, <https://www.smchealth.org/solidwaste>, accessed May 30, 2023.

<sup>56</sup> San Mateo County Office of Sustainability, 2023. Solid Waste Management, <https://performance.smcgov.org/stories/s/Office-of-Sustainability-Solid-Waste-Management-40/nm65-ibfd/> accessed May 30, 2023.

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San Mateo. RethinkWaste owns and manages the Shoreway Environmental Center in San Carlos, which receives all the recyclables, green waste, and garbage collected from the Member Agencies. RethinkWaste also provides oversight and management of service providers that collect, process, recycle, and dispose of materials and educates residents and businesses through waste reduction, recycling, and solid waste programs. South Bay Recycling operates the Shoreway Environmental Center on behalf of RethinkWaste. Recology San Mateo County provides recycle, compost, and garbage collection services for residents and businesses in San Mateo County.

### *Local Regulations*

#### San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to solid waste are primarily in the Public Services and Facilities Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.3.3, *Impact Discussion*.

#### City of San Mateo Municipal Code

The SMMC includes various directives pertaining to solid waste. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to solid waste impacts are included in Title 7, *Health, Sanitation, and Public Nuisances*.

- Chapter 7.32, *Garbage*, establishes prohibitions on dumping, receptacle requirements, collection rates, and requirements to submit a solid waste plan for wet waste retail businesses.
- Chapter 7.33, *Recycling and Salvaging of Construction and Demolition Debris*, requires recycling of construction and demolition debris from all new residential or commercial development and remodel projects valued at more than \$50,000. It is also required that a Construction and Demolition Recycling and Waste Reduction Plan and a security deposit be submitted as a condition of the building permit.

#### City of San Mateo Reusable Bag Ordinance and Polystyrene Ban

Implementation of the Reusable Bag Ordinance began in June 2013 in the City of San Mateo. The ordinance states that no retail establishment shall provide a single-use carry-out bag to a customer at the check stand or point of sale. As of January 1, 2015, the retail established may make available to customers a recycled paper bag or reusable bag for a minimum charge of 25 cents. Every retail establishment must keep complete and accurate records or documents of the purchase and sale of any recycled paper bag or reusable bag for a minimum of three years. San Mateo County Environmental Health Division has the authority to enforce this ordinance and impose fees for non-compliance.<sup>57</sup>

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<sup>57</sup> City of San Mateo, 2023. Reusable Bag Ordinance, <https://www.cityofsanmateo.org/2539/Reusable-Bag-Ordinance> accessed May 31, 2023.

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In conjunction with San Mateo County and eighteen other municipalities in the Bay Area, the City also implemented a polystyrene ban ordinance in May 2013. The ordinance requires that no vendor shall use polystyrene-based disposable food service ware when providing prepared food. San Mateo County Environmental Health Division is also responsible for enforcing this ordinance and imposing fees for non-compliance.<sup>58</sup>

### Existing Conditions

#### *Solid Waste Collection*

Recology San Mateo County (Recology) is the franchise waste hauler for the City of San Mateo and provides residential and commercial solid waste collection, composting, and recycling services. Recology provides the following services to residents and businesses in the city:

- Weekly curbside collection of waste in three containers: landfill waste in a black container, recyclables in a blue container, and organics (including yard and food waste) in a green container.
- Free compost for pickup at the Shoreway Environmental Center, up to two bags of three cubic feet. Limit two bags per visit and up to two visits per week.
- Recycling of construction and demolition debris at the Shoreway Environmental Center.
- Disposal of used motor oil and filters, antifreeze, paint, electronics, fluorescent lighting tubes, batteries, medicines and pharmaceuticals, mattresses, automobile batteries, and small appliances at the Shoreway Environmental Center.

All waste collected from residents and businesses is transferred to Shoreway Environmental Center in San Carlos, which is a materials transfer and processing facility. Recyclable materials are separated from landfill waste and shipped to various markets for processing. Organic waste is sent to Newby Island and Grover composting facilities; the finished product is shipped back to the Shoreway Environmental Center where residents and businesses can pick it up at no cost. Construction and demolition waste and other types of construction materials are sent to Zanker Road recycling facility in San Jose. The Shoreway Environmental Center has a permitted daily capacity of 3,000 tons.<sup>59</sup>

#### *Landfills*

In 2019, solid waste generated by San Mateo was delivered to 20 facilities and landfills in the Bay Area for a total disposal rate of 86,512 tons. However, 83 percent of the solid waste was delivered to Corinda Los Trancos (Ox Mountain) Landfill.<sup>60</sup>

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<sup>58</sup> City of San Mateo, 2023, Polystyrene Ban, <https://www.cityofsanmateo.org/2540/Polystyrene-Ban> accessed May 31, 2023.

<sup>59</sup> CalRecycle, 2023, SWIS Facility/Site Activity Details: Shoreway Environmental Center (41-AA-0016), <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1575?siteID=3236>, accessed May 30, 2023.

<sup>60</sup> CalRecycle, 2023, Jurisdictional Disposal and Alternative Daily Cover (ADC) Tons by Facility, <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility> accessed May 31, 2023.

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The Ox Mountain Landfill is located in Half Moon Bay and is owned and operated by Browning Ferris Industries of CA, Inc. The Ox Mountain landfill is permitted to receive up to 3,598 tons of waste per day, has a remaining capacity of 22 million cubic yards, and is estimated to close by 2034.<sup>61</sup> The landfill has a remaining capacity of more than 15 years as required by AB 939.

After solid waste is collected and sorted at the San Carlos Transfer Station, it is transported to the Los Trancos Canyon (Ox Mountain) landfill in Half Moon Bay. Table 4.17-11, *Landfill Capacity*, provides more information on the landfill capacity and closing date for the primary landfill that receives solid waste from the City of San Mateo.

**TABLE 4.17-11 LANDFILL CAPACITY**

Landfill Name and Location	Maximum Permitted Throughput, tons/day	Average Disposal, tons/day	Residual Disposal Capacity, tons/day	Remaining Capacity, cubic yards	Estimated Closing Year
Ox Mountain Landfill (Corinda Los Trancos) Half Moon Bay, CA 94019	3,598	1,949	1,649	22,180,000	2034

Source: CalRecycle 2023, SWIS Facility Details and Jurisdiction Disposal by Facility.

### *Solid Waste Diversion and Recycling*

Compliance with AB 939 is measured by comparing the CalRecycle target disposal rates for residents and employees to actual disposal rates. The CalRecycle target disposal rates for San Mateo were 5.8 pounds per day (ppd) for residents and 13.3 ppd for employees. The actual disposal rates in 2021 were 3.7 ppd for residents and 6.9 ppd for employees.<sup>62</sup> Therefore, the solid waste diversion goals for San Mateo have been met.

### 4.17.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to solid waste if it would:

- Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- Be out of compliance with federal, State, and local management and reduction statutes and regulations related to solid waste.
- In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to solid waste.

<sup>61</sup> CalRecycle, 2023, SWIS Facility/Site Activity Details: Corinda Los Trancos Landfill (Ox Mtn)(41-AA-0002), <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1561?siteID=3223>, accessed May 31, 2023.

<sup>62</sup> CalRecycle, 2023, *Jurisdiction Diversion/Disposal Rate Summary*, <https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006>, accessed May 31, 2023.

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### 4.17.3.3 IMPACT DISCUSSION

<b>UTIL-7</b>	<b>The project would not generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.</b>
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Under the proposed project, the population is anticipated to increase by 52,020 residents and 16,920 jobs. As shown in Table 4.17-12, *Increase in Solid Waste Generation at 2040 Buildout*, this level of growth would result in an increase in solid waste of approximately 154 tons per day, or 56,434 tons per year. These numbers are conservative because, with continued recycling and waste reduction programs implemented by the City and ReThinkWaste, the waste generation rates would be reduced over time.

**TABLE 4.17-12 INCREASE IN SOLID WASTE GENERATION RATES AT 2040 BUILDOUT**

Category	Increase in Residents or Jobs	Solid Waste Generation Rate (ppd)	Increase in Solid Waste (tons/day)	Increase in Solid Waste (tons/year)
Residents	52,020	3.7	96	35,127
Jobs	16,920	6.9	58	21,307
<b>Total</b>			<b>154</b>	<b>56,434</b>

Source: CalRecycle, 2023; PlaceWorks, 2023.

As shown in Table 4.17-12, an increase of 154 tons/day with buildout of the project would be about 9 percent of the current residual capacity of 1,649 tons/day at Ox Mountain Landfill. In addition, some of the solid waste from the City of San Mateo is transported to other landfills in the Bay Area and the majority of the waste generated in the city is diverted from landfill disposal through recycling and composting. This estimate conservatively assumes that all of the generated waste is landfilled. The results in Table 4.17-12 show that the proposed project would not generate solid waste in excess of the capacity of the landfills that serve the City.

Furthermore, all new development pursuant to the proposed project would require compliance with Division 4.4 of the 2022 CALGreen Building Code, which requires that at least 65 percent of nonhazardous construction and demolition waste from residential and nonresidential construction operations be recycled and/or salvaged for reuse. New development and redevelopment would also need to comply with the requirements of AB 341 that mandates recycling for commercial and multifamily residential land uses. Therefore, solid waste facilities would be able to accommodate project-generated solid waste, and impacts would be less than significant.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to reduce solid waste generation and increase recycling efforts. The following General Plan 2040 goal, policies, and action would serve to minimize potential adverse impacts on the solid waste infrastructure and landfill capacities:

- **Goal PSF-8:** Reduce the generation of solid waste and increase the diversion of waste from landfills.
  - **Policy PSF 8.1: Solid Waste Disposal.** Support waste reduction and diversion programs to reduce solid waste materials in landfill areas in accordance with State requirements.

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- **Policy PSF 8.2: Recycling.** Support programs to recycle solid waste and require provisions for on-site recycling in new development, in compliance with state requirements.
- **Policy PSF 8.3: Composting.** Maintain the curbside composting program and expand composting of organics in accordance with state requirements.
- **Action PSF 8.4: Waste Reduction.** Reduce waste sent to landfills by San Mateo’s residents, businesses, and visitors, as required by state law and San Mateo Municipal Code, by mandating recycling and compost programs, setting aggressive waste-reduction goals for all development, and implementing appropriate solid waste rates to recover cost of services provided. Supportive actions for waste reduction are detailed in the Climate Action Plan.

With continued compliance with the applicable regulations, leading to increased recycling and waste diversion, and adherence to the proposed General Plan goal, policies, and action listed above, anticipated rates of solid waste disposal from the proposed project would be less than significant with respect to permitted landfill capacity. In addition, the City is well below the CalRecycle target disposal rates and meets the regulatory requirements of AB 939. Therefore, implementation of the proposed project would not generate solid waste in excess of State and local standards, or in excess of the capacity of the landfills, or otherwise impair the attainment of solid waste reduction goals and the impact is *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>UTIL-8</b>	<b>The project would not be out of compliance with federal, State, and local management and reduction statutes and regulations related to solid waste.</b>
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As discussed under impact discussion UTIL-7, Recology San Mateo County, which serves the EIR Study Area, complies with all State requirements to reduce the volume of solid waste through recycling and organic waste diversion. The City’s per capita disposal rates of 3.7 ppd per resident and 6.9 ppd per employee are well below the CalRecycle targets of 5.8 pounds per day (ppd) for residents and 13.3 ppd for employees. In addition, all potential future development pursuant to the proposed project would comply with Division 4.4, *Material Conservation and Resource Efficiency*, of the CALGreen Building Code, which requires that at least 65 percent of nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Potential future development would also comply with AB 341, which mandates recycling for commercial and multifamily residential land uses as well as schools and school districts. Additionally, potential future businesses pursuant to the proposed project that generate organic waste in amounts over a certain threshold would be mandated to recycle organic matter in accordance with AB 1826. Therefore, the City and Recology would comply with all applicable federal, State, and local solid waste regulations, and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.



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UTIL-9	<b>The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to solid waste.</b>
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The area considered for cumulative impacts to solid waste disposal facilities is San Mateo County, which is serviced by Recology San Mateo County. As reported by ABAG, the total population of San Mateo County is expected to increase from 796,925 to 916,590 by 2040.<sup>63</sup> Assuming that solid waste generation increases at the same rate as the population (15 percent), the increase in the amount of waste generated in the County by 2040 would be about 221 tons per day. Conservatively assuming that all of this waste is landfilled, although the current diversion rate by Recology San Mateo County is about 68 percent, the additional waste generated by San Mateo County, including the waste generated by San Mateo with the proposed project buildout, would still be only about 23 percent of the daily residual capacity of Ox Mountain Landfill.

In addition, new development within San Mateo County would comply with Division 4.4 of the 2022 CALGreen, which requires that at least 65 percent of nonhazardous construction and demolition waste from residential and nonresidential construction operations be recycled and/or salvaged for reuse. This would also reduce the volume of solid waste transported to the landfills. Recology San Mateo County also reports an increasing diversion rate in the last four years, with 60 percent of all solid waste diverted from landfilling. This trend is expected to increase in the future. Continued compliance with the applicable regulations and an increase in recycling and landfill diversion rates would ensure that solid waste cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

### 4.17.4 STORMWATER INFRASTRUCTURE

#### 4.17.4.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

The regulatory framework for stormwater is described in detail in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR. The regulatory requirements that pertain solely to storm drain systems are repeated below.

##### *Federal Regulations*

##### National Pollutant Discharge Elimination System

The NPDES permit program was established by the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States from their municipal separate storm water systems (MS4s). Under the NPDES program, all facilities that discharge pollutants into waters of the United States

<sup>63</sup> ABAG, 2018. *Plan Bay Area Projections 2040*.

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are required to obtain an NPDES permit. Requirements for stormwater discharges are also regulated under this program. The City is within the jurisdiction of the San Francisco Bay RWQCB (Region 2) and is subject to the waste discharge requirements of the Municipal Separate Storm Sewer System (MS4) Permit (Order No. R2-2022-0018), which became effective on July 1, 2022.<sup>64</sup>

Under Provision C.3 of the MS4 Permit, the permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows. This goal is accomplished primarily through the implementation of low impact development techniques.

### *State Regulations*

On April 7, 2015, the SWQCB adopted an amendment to the Water Quality Control Plan for Ocean Waters of California to control trash. In addition, the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California added the section: Part 1, Trash Provisions. Together, they are collectively referred to as “the Trash Amendments.” The purpose of the Trash Amendments is to provide statewide consistency for the RWQCBs in their regulatory approach to protect aquatic life and public health beneficial uses, reduce environmental issues associated with trash in State waters, and focus limited resources on high-trash-generating areas.<sup>65</sup>

The Trash Amendments apply to all Phase I and II permittees under the NPDES municipal separate storm sewer systems (MS4) permits. Compliance with the Trash Amendment requires municipalities to install certified trash treatment control systems on all catch basins no later than December 2, 2030.<sup>66</sup>

### *Regional Regulations*

#### San Mateo Countywide Water Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is a partnership of the City/County Association of Governments (C/CAG), 20 incorporated Cities within the County, and the County of San Mateo, which share a common MS4 permit. This partnership also relies on each of the municipalities to implement local stormwater pollution prevention and control activities for its own local storm drain systems.

<sup>64</sup> California Regional Water Quality Control Board, San Francisco Bay Region, May 2022, *Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008*, [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/stormwater/MRP/mrp5-22/R2-2022-0018.pdf](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/MRP/mrp5-22/R2-2022-0018.pdf), accessed May 26, 2023.

<sup>65</sup> State Water Resources Control Board, April 7, 2015, *Amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, [https://www.waterboards.ca.gov/water\\_issues/programs/trash\\_control/docs/01\\_final\\_sed.pdf](https://www.waterboards.ca.gov/water_issues/programs/trash_control/docs/01_final_sed.pdf).

<sup>66</sup> State Water Resources Control Board, 2023, *Storm Water Program - Trash Implementation Program*, [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/trash\\_implementation.html](https://www.waterboards.ca.gov/water_issues/programs/stormwater/trash_implementation.html), accessed May 26, 2023.

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Post-construction stormwater quality requirements pursuant to the SMCWPPP are described in the C.3 Regulated Projects Guide (Version 1.0) issued in January 2020.<sup>67</sup> The C.3 Regulated Projects Guide includes instructions for implementing site design measures, source controls, stormwater treatment measures, construction site controls, and low-impact development measures.

### San Mateo County Stormwater Resource Plan

The San Mateo County Stormwater Resource Plan (SRP) is a comprehensive document that addresses specific stormwater runoff issues in the County with a watershed-based approach. The main goals of the SRP are to identify and prioritize opportunities to better utilize stormwater as a resource in San Mateo County through a detailed analysis of watershed processes, surface and groundwater resources, input from stakeholders and the public, and analysis of multiple benefits that can be achieved through strategically planned stormwater management projects.<sup>68</sup> These projects aim to capture and manage stormwater more sustainably, reduce flooding and pollution associated with runoff, improve biological functioning of plants, soils, and other natural infrastructure, and provide many community benefits, including cleaner air and water and enhanced aesthetic value of local streets and neighborhoods. SB 985 (Pavley, 2014) requires SRPs to be developed to be eligible for funding from future State bond measures for stormwater and dry weather capture projects.<sup>69</sup>

### *Local Regulations*

#### San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to stormwater infrastructure are primarily in the Public Services and Facilities Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.17.4.3, *Impact Discussion*.

#### City of San Mateo Municipal Code

The SMMC includes various directives pertaining to stormwater infrastructure. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to stormwater infrastructure impacts are included in Title 3, *Taxation and Finance*, Title 7, *Health, Sanitation, and Public Nuisances*, and Title 23, *Buildings and Construction*.

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<sup>67</sup> San Mateo Countywide Water Pollution Prevention Program, January 2020, *C.3 Regulated Projects Guide*, [https://www.flowstobay.org/wp-content/uploads/2020/03/SMCWPPP-C.3-Regulated-Project-Guide-High-Res\\_021220\\_0.pdf](https://www.flowstobay.org/wp-content/uploads/2020/03/SMCWPPP-C.3-Regulated-Project-Guide-High-Res_021220_0.pdf), accessed May 25, 2023.

<sup>68</sup> City/County Association of Governments of San Mateo, February 2017, *Stormwater Resource Plan for San Mateo County*, <https://ccag.ca.gov/wp-content/uploads/2017/02/SMC-SRP-Report-FINAL-1.pdf>, accessed April 4, 2023.

<sup>69</sup> City/County Association of Governments of San Mateo, 2022, *San Mateo Storm Water Resources Plan*, <https://ccag.ca.gov/srp/>, accessed April 4, 2023.

## UTILITIES AND SERVICE SYSTEMS

- Chapter 3.64, *Fees*, provides the authority to issue fees subject to change for each fiscal year, as per the budget submitted by the City Manager to the City Council. Fees related to stormwater include fees to obtain a Stormwater Pollution Prevention Program (STOPP) Construction Permit from the City, an Erosion Control Compliance Fee (refundable deposit) for projects of one acre or more, and a Stormwater Management Permit Annual Fee.
- Chapter 7.39, *Stormwater Management and Discharge Control*, aims to protect and enhance the water quality of the watercourses, water bodies, and wetlands within the city by eliminating non-stormwater discharges to the municipal separate storm drain, controlling the discharge to municipal separate storm drains from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in stormwater discharges to the maximum extent practicable. As stated in Section 7.39.090, *Discharge of Pollutants*, all discharges of material other than stormwater must comply with an NPDES permit issued for the discharge. Construction projects must obtain a Stormwater Pollution Prevention Program construction permit from the Director of Public Works prior to site development planning application approval, as required by Section 7.29.170, *Stormwater Pollution Prevention Construction Permit*. Section 7.39.210, *Stormwater Treatment Facilities*, allows the Director to require permanent stormwater treatment facilities be designed into projects and Section 7.29.235, *Stormwater Management Permit*, requires a Stormwater Management permit from the Director prior to approval. Section 7.39.245, *Threatened Discharge*, prohibits the discharge of any domestic waste or industrial waste into storm drains, gutters, creeks, or San Francisco Bay.
- Chapter 23.72.150, *Stormwater Management and Rainwater Retention*, requires project applicants to implement stormwater best management practices into the landscape and grading design plans to minimize runoff and increase onsite rainwater retention and infiltration, as consistent with City stormwater management requirements.

### San Mateo Storm Drain Master Plan

The San Mateo Storm Drain Master Plan is dated June 2004 and is currently in the process of being updated. The 2004 Storm Drain Master Plan evaluated the capacity of the existing storm drain facilities, identified areas with deficiencies, and presented a Capital Improvement Program to implement upgrades to the system.<sup>70</sup> The document indicated that most of the storm drain problems occur between Alameda de las Pulgas and Highway 101 with many of the pipes being undersized and causing local flooding. Also, improvements to the channels that convey stormwater runoff to San Francisco Bay would greatly improve drainage throughout the City. The historic problem areas and required improvements are detailed in the plan.

### San Mateo Storm Drain Design Standards

The design criterion for storm drains in the city is that stormwater runoff from the 10-year storm event is carried in the street no deeper than the top of the curb and stormwater runoff from the 100-year storm event is carried within the street right-of-way without adjacent property damage.<sup>71</sup> Pump stations should

<sup>70</sup> Schaaf & Wheeler, 2004, Storm Drain Master Plan, San Mateo, California. Dated April 2004.

<sup>71</sup> Schaaf & Wheeler, 2004, Storm Drain Master Plan, San Mateo, California. Chapter 4, Drainage Standards.

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be designed to discharge the 100-year design flow without endangering property. The City also has standard storm drain details and drawings issued by the Public Works Department.<sup>72</sup>

### San Mateo Green Infrastructure Plan

The 2019 Green Infrastructure Plan is a guide to siting, implementation, tracking and reporting of green infrastructure (GI) projects on City-owned land through 2040.<sup>73</sup> Green infrastructure uses vegetation, soil, and other elements to capture, treat, infiltrate and slow urban runoff. GI facilities can also be designed to capture stormwater for uses such as irrigation and toilet flushing. GI integrates building and roadway design, complete streets, drainage infrastructure, urban forestry, soil conservation, and sustainable landscaping practices to achieve multiple benefits. Types of GI measures that can be constructed in public and private spaces include: 1) bioretention, 2) stormwater tree well filters, 3) pervious pavement, 4) infiltration facilities, 5) green roofs, and 6) rainwater harvesting and use facilities.

### San Mateo Community Flood & Storm Protection Initiative

This initiative proposes to establish a user fee for stormwater management that is charged to property owners for the purpose of rehabilitating and strengthening the City's stormwater system to adequately protect property owners from flooding and pollution.<sup>74</sup> The existing stormwater infrastructure is aging and is unable to accommodate extreme storm events that are likely to increase in the future with climate change. It is estimated that \$9 million per year is needed for improving and operating the stormwater system and there currently is no dedicated funding source for these efforts. The funds would be used to maintain, repair, and upgrade over 100 miles of storm drains and channels and nine major pump stations, protect properties from local flooding, and restore the Marina Lagoon for year-round stormwater conveyance.

## Existing Conditions

The City's stormwater infrastructure consists of 130 miles of storm drains, 20 miles of open creeks and drainage channels, one flood control lagoon (Marina Lagoon), ten pump stations, and three miles of Bayfront levees.<sup>75</sup> Storm drains within the city are constructed of reinforced concrete pipe (RCP) with diameters ranging from 8 inches to 120 inches. Reinforced concrete pipes have an extended life span and can be expected to last indefinitely. However, periodic pipe repair and replacement, as needed, is recommended.

The City's drainage system is divided into seven watersheds, with the first three draining directly to San Francisco Bay, either by gravity or pumping, and the other four draining to the Marina Lagoon and then pumped into San Francisco Bay. On the north end of San Mateo, pumping systems provide flood

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<sup>72</sup> City of San Mateo, 2023, *Storm Drain Structures and Appurtenances*, <https://www.cityofsanmateo.org/2081/Standard-Drawings>, accessed May 24, 2023.

<sup>73</sup> City of San Mateo, 2019, *City of San Mateo Green Infrastructure Plan*.

<sup>74</sup> City of San Mateo, 2023, *Community Flood & Storm Protection Initiative*.  
<https://www.cityofsanmateo.org/4708/Community-Flood-Storm-Protection-Initiat> accessed on May 30, 2023.

<sup>75</sup> City of San Mateo, 2023, *Community Flood & Storm Protection Initiative*.  
<https://www.cityofsanmateo.org/2288/Community-Flood-Storm-Protection-Initiat> accessed on May 30, 2023.

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protection to low-lying areas in the North Shoreview neighborhood and the South Shoreview drainage system. These areas are protected by a levee system and pump stations are required to discharge runoff that collected behind the levee.

The two main channels that convey stormwater to the Bay are San Mateo Creek in the northern half of the City and Laurel Creek to the south. The 16<sup>th</sup> Avenue Drainage Channel and the 19<sup>th</sup> Avenue Drainage Channel are excavated channels that collect local runoff from storm drains and convey it to the Marina Lagoon. Water levels in Marina Lagoon are regulated by controlling inflows through the O'Neill Slough intake gates and discharges through the Marina Lagoon pump station. Stormwater runoff is delivered to these creeks and channels via a system of street gutters, pipes, ditches, and pump stations. The storm drainage system is maintained by the City Department of Public Works, as are the levees that provide flood protection from creek flooding and tidal flow from San Francisco Bay.

Some of the storm water deficiencies noted in the 2004 Storm Drain Master Plan have subsequently been addressed. For example, the pumping capacity at the Coyote Point and Poplar Avenue Pump Stations was increased to alleviate stormwater flooding concerns in the North Shoreview area.

Currently, there is no separate funding in the City's Capital Improvement Program for storm drain infrastructure, although a stormwater user fee is being considered to be levied on property owners to fund future infrastructure improvements. Limited funds are obtained from sewer service charges for projects where the goal is to reduce stormwater inflow and infiltration to minimize SSOs. This may include catch basin cleaning prior to storm events and routine storm drain cleaning and maintenance. Some funding is also transferred from the Department of Public Works General Fund. Current projects involving stormwater in the City's CIP include bayfront levee improvements, levee repairs, storm system dredging, and storm drain upgrades and replacement. Planned projects with passage of the Community Flood & Storm Protection Initiative include: 1) storm drain condition and capacity assessments, 2) updated Storm Water Master Plan, 3) San Mateo Creek and Marina Lagoon dredging and maintenance, 4) Pacific Blvd drainage channel rehabilitation, and 5) storm water capacity and flood prevention improvement projects, including drainage area projects, pump station upgrades, levee improvements, and green infrastructure projects.

The SWRCB, as the implementing agency for the Trash Amendments, mandates that all MS4 permittees, which includes the City of San Mateo, must install certified trash treatment control systems on all catch basins no later than December 2, 2030.

### 4.17.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to stormwater infrastructure if it would:

- Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.
- In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to stormwater infrastructure.



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### 4.17.4.3 IMPACT DISCUSSION

UTIL-10	<b>The project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.</b>
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New development and/or redevelopment as part of the proposed project would result in an increase in impervious surfaces, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause nuisance flooding in areas without adequate drainage facilities. However, most of the City is already built out and future development sites are in infill areas that are already developed and paved. Therefore, new development on these sites should not create a significant increase in impervious surfaces.

Also, regulated projects that create or replace 5,000 square feet or more of impervious surface would be required to implement site design, source control, and stormwater treatment and runoff measures using specific numeric sizing criteria based on the volume and flow rate of stormwater that is generated. Each project undergoes review by City personnel to ensure that the regulatory requirements for temporary on-site stormwater runoff retention have been met. This would minimize the amount of stormwater runoff from potential future development in the EIR Study Area.

With the implementation of these provisions for future development, there should not be significant increases in stormwater runoff to the City's storm drain system. The construction of new stormwater facilities through the CIP, implementation of best management practices and on-site stormwater control measures, and preparation of the required documents and review by the City would serve to minimize any potential impacts associated with stormwater.

However, the City's Storm Drainage Master Plan describes the improvements that are planned to accommodate future growth within the EIR Study Area, and the plan accounted for a larger population increase than is currently anticipated for the proposed project. Existing storm drains would need to be upgraded and new detention basins would need to be built with future development. However, the construction of these facilities would not cause significant environmental effects.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to consider impacts to storm drain infrastructure. The following General Plan 2040 goal and policies would serve to minimize potential adverse impacts on stormwater discharge:

- **Goal PSF-3:** Maintain sewer, storm drainage, and flood-control facilities adequate to serve existing needs, projected population, and employment growth and that provide protection from climate change risk.
  - **Policy PSF 3.6: Stormwater System.** Operate, upgrade, and maintain a stormwater drainage and flood-control system that safely and efficiently conveys runoff to prevent flooding and protect life and property; minimizes pollutants discharging to creeks and San Francisco Bay; manages stormwater as a resource and not a waste; and protects against the impacts of climate changes.

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- **Policy PSF 3.8: Stormwater Pollution Prevention.** In accordance with requirements in the Municipal Regional Stormwater Permit, implement programs, plans, and policies to ensure pollutants are minimized in stormwater runoff.
- **Policy PSF 3.9: Low Impact Development.** Minimize stormwater runoff and pollution by encouraging low-impact design (LID) features, such as pervious parking surfaces, bioswales, and filter strips in new development.
- **Policy PSF 3.10: New Creekside Development Requirements.** Require that new creekside development protects and improves setbacks, banks, and waterways adjacent to the development projects to increase flood protection and enhance riparian vegetation and water quality. Prevent erosion of creek banks.
- **Policy PSF 3.11: Hydrologic Impacts of Creek Alteration.** Ensure that improvements to creeks and other waterways do not cause adverse hydrologic impacts, adversely affect adjacent properties, or significantly increase the volume or velocity of flow of the subject creek.
- **Policy PSF 3.12: Levee System.** Continue to assess, maintain, and upgrade the City's levee system. Collaborate with the Federal Emergency Management Agency, OneShoreline, and neighboring agencies to ensure adequate flood control and sea level rise protection.
- **Action PSF 3.13: City Infrastructure Studies and Master Plans.** Develop and coordinate studies and master plans to assess infrastructure and to develop a Capital Improvement Program for necessary improvements. Incorporate climate change risks, such as the impacts of droughts, increasing storm events, sea level rise, and groundwater changes in the planning process.
- **Action PSF 3.15: Green Infrastructure.** Implement the City's Green Infrastructure Plan to gradually shift from a traditional stormwater conveyance system ("gray") to a more natural system that incorporates plants and soils to mimic watershed processes, capture and clean stormwater, reduce runoff and increase infiltration, and create healthier environments ("green").
- **Action PSF 3.17: Stormwater Requirements for Development.** In accordance with State regulatory mandates, require applicable new and redevelopment projects to incorporate site design, source control, treatment, and hydromodification management measures to minimize stormwater runoff volumes and associated pollutants. Stormwater management via green infrastructure systems shall be prioritized.
- **Action PSF 3.18: Incentives for Low-Impact Development.** Develop and implement incentives to encourage applicants to include low-impact design features in new development.

Compliance with these proposed General Plan goal and policies and the regulatory provisions in the MS4 permit that limit runoff from new development would ensure that the implementation of the proposed project would not result in significant increases in runoff and would not contribute to the construction of new storm drain facilities or expansion of existing facilities that would cause significant environmental impacts. In addition, the City would continue to repair, rehabilitate, and upgrade the storm drain system through implementation of the CIP program. Therefore, impacts with respect to stormwater infrastructure would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## UTILITIES AND SERVICE SYSTEMS

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UTIL-11	<b>The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to stormwater infrastructure.</b>
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The analysis of cumulative storm drainage impacts considers future development within the seven watersheds that encompass the EIR Study Area. Cumulative projects could result in an incremental increase in impervious surfaces that could increase stormwater runoff and impact existing storm drain facilities. However, all cumulative projects would be required to comply with City and County ordinances and General Plan goals, policies, and actions, as well as the MS4 permit, which would minimize stormwater runoff.

Development within the EIR Study Area would require conformance with State and City policies that would reduce hydrology and infrastructure construction impacts to less than significant levels. Any new development in the city would be subject to the proposed General Plan goal and policies listed in impact discussion UTIL-10 and City ordinances, design guidelines, zoning codes, and other applicable City requirements that reduce impacts related to hydrology and stormwater drainage facilities. More specifically, potential changes related to stormwater flows, drainage, impervious surfaces, and flooding would be minimized by the implementation of stormwater control measures, retention, infiltration, and low-impact-development measures and review by the City's Public Works Department to integrate measures to reduce potential stormwater drainage and flooding impacts.

All cumulative projects in unincorporated County land within the watershed areas would be subject to similar permit requirements and would be required to comply with various municipal codes and policies and County ordinances, as well as numerous water quality regulations that control construction-related and operational discharge of pollutants in stormwater. The water quality regulations implemented by the San Francisco Bay RWQCB take a basinwide approach and consider water quality impairment in a regional context. For example, the NPDES Construction Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the MS4 Permit also applies to San Mateo County to manage stormwater systems and be collectively protective of water quality. For these reasons, impacts from future development within the EIR Study Area related to stormwater infrastructure construction are not cumulatively considerable.

In combination with past, present, and reasonably foreseeable projects, proposed development and redevelopment within the EIR Study Area would not result in a cumulatively considerable impact to stormwater infrastructure and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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### 4.17.5 ENERGY INFRASTRUCTURE

#### 4.17.5.1 ENVIRONMENTAL SETTING

##### Regulatory Framework

###### *Federal Regulations*

###### National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

###### Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

###### Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

###### National Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. The regulations enacted under this act have been updated several times. The latest revision is dated May 2023 and includes additional safety regulations for gas transmission pipelines, including repair criteria, integrity management improvements, cathodic protection, and other inspection and maintenance procedures. The regulations are encoded in 49 Code of Federal Regulations, Part 192.

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### *State Regulations*

#### Warren-Alquist Act

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest revision is dated January 2022.

#### California Public Utilities Commission Long Term Energy Efficiency Strategic Plan

Adopted in September 2008 and updated in January 2011, the California Public Utilities Commission (CPUC) Long Term Energy Efficiency Strategic Plan provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-, mid-, and long-term strategies to assist in achieving these goals. The plan sets forth the following four goals, known as "Big Bold Energy Efficiency Strategies," to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation, and air conditioning will be transformed to ensure that its energy performance is optimal for California's climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

The CPUC and CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- Goal 1: New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- Goal 2: 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- Goal 3: Transform the commercial lighting market through technological advancement and innovative utility initiatives.

#### California Energy Code

The State of California provides a minimum standard for energy conservation through Title 24, Part 6 California Code of Regulations, commonly referred to as the California Energy Code. The California Energy Code was first adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977. The standards are updated on a three-year cycle to allow for consideration and possible incorporation of new energy efficiency technologies and methods. In August 2021, the CEC adopted the 2022 California Energy Code, which went into effect on January 1, 2023. The 2022 standards require mixed-fuel single-family homes to be electric ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic

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systems and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.<sup>76</sup>

### California Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. CALGreen (24 California Code of Regulations, Part 11) was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce greenhouse gas (GHG) emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. The latest 2022 CALGreen code became effective on January 1, 2023.

The CALGreen code includes provisions to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, etc. The code provides for design options, allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.<sup>77</sup>

### 2016 Appliance Efficiency Regulations

The 2016 Appliance Efficiency Regulations (Title 20, California Code of Regulations Sections 1601 through 1608), combined with federal standards, set minimum efficiency levels for energy and water consumption in products, such as consumer electronics, household appliances, and plumbing equipment. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state, and those designed and sold exclusively for use in recreational vehicles or other mobile equipment. These regulations exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

### California Energy Benchmarking and Disclosure

The Building Energy Benchmarking Program is mandated under AB 802 and requires owners of large commercial and multifamily buildings to report energy use to the CEC by June 1 annually. This program applies to all buildings with more than 50,000 square feet of gross floor area and owners of multifamily residential buildings with more than 50,000 square feet and 17 or more utility accounts. The bill requires

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<sup>76</sup> California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

<sup>77</sup> California Building Standards Commission, 2022, 2022 California Code of Regulations Title 24, Part 11, <https://codes.iccsafe.org/content/CAGBC2022P1>, accessed June 1, 2023.



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each utility, upon the request and authorization of the owner, owner's agent, or operator of a building covered under the regulation, to deliver or provide aggregated energy usage data for a covered building. The required energy usage shall be reported to the CEC through the Energy Star Portfolio Manager.

### California Renewable Portfolio Standards

A major component of California's Renewable Energy Program is the renewables portfolio standard established under SB 1078 (Sher) and SB 107 (Simitian). The standard requires that a specified percentage of the electricity that utilities provide comes from renewable resources. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. SB 1020, signed into law on September 16, 2022, requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all State agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

### CPUC Natural Gas Regulations

The CPUC regulates natural gas utility rates and services as well as the transportation of natural gas over the extensive transmission and distribution pipeline systems. The CPUC also regulates gas storage facilities. The Gas Safety and Reliability Branch of the CPUC ensures that natural gas pipeline systems are designed, constructed, operated, and maintained according to the safety standards set by the CPUC and the federal government. The regulations are provided in the CPUC General Order No. 112-E and the Natural Gas Pipeline Safety Act of 2011.

### *Local Regulations*

The SMMC includes various directives that pertain to energy impacts. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to energy impacts are included in Title 15, *Public Utilities*, and Title 23, *Buildings and Construction*.

- Chapter 15.16, *Gas and Electric Franchise*, applies to franchise applicants that will construct poles, wires, and conduits for transmitting and distributing electricity and applicants that will lay pipes for transmitting and distributing gas under City streets. This chapter also specifies the percentage of gross annual receipts that must be paid to the City for the utility service that has been awarded.
- Chapter 15.24, *Community Antenna Television Franchise*, describes the procedures for granting a franchise to applicants that provide cable service, which includes video programming and which is provided to multiple subscribers within the city.
- Chapter 15.25, *State Video Franchises*, provides regulations for the provision of video service by state franchise holders, in accordance with the Digital Infrastructure and Video Competition Act of the California Public Utilities Code.
- Chapter 23.23, *Energy Code*, adopts the 2022 Edition of the California Energy Code.
- Chapter 23.44, *Electric Vehicle Charging Stations*, provides the requirements for all electric vehicle charging stations to meet applicable health and safety standards imposed by the State and the City. Permit applications must be submitted to the City's Building Division, which will review the application and conduct inspections.

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- Chapter 23.46, *Small Residential Rooftop Solar Energy Systems*, provides an expedited, streamlined solar energy permitting process to achieve timely and cost-effective installations of small residential rooftop solar energy systems. The chapter lists the requirements for submittal of an expedited application for a solar energy system and the City's website provides a standard electrical plan that can be used as a template.
- Chapter 26.32, *Public Utilities*, requires utility easements to be provided within subdivisions that are designed for underground electrical and communications distribution services. All utility distribution facilities shall be placed underground, except for equipment appurtenant to underground facilities and metal poles supporting high voltage wires, switches, transformers, and streetlights.
- Chapter 23.70, *Green Building Code*, includes provisions to provide electric car charging capabilities for new single-family dwellings, townhouses, multi-family dwellings, and new non-residential construction. This chapter also contains a local amendment that requires all-electric buildings for new residential and non-residential construction. There are exceptions to this requirement, but the infrastructure must be designed to accommodate the future installation of electric heating appliances.

### Existing Conditions

#### *Electricity*

Two electricity providers, Pacific Gas and Electric Company (PG&E) and Peninsula Clean Energy (PCE) serve the EIR Study Area.

PCE was launched by San Mateo County and all twenty of its cities, including San Mateo, to meet local climate action goals. PCE is the default electricity provider for all communities and cities in San Mateo County and offers two electricity options, each with a different percentage of sustainable energy.<sup>78</sup>

Residents and businesses in San Mateo are automatically enrolled in PCE's ECOplus service, which is distributed to customers through PG&E's existing grid infrastructure. The City of San Mateo has opted to purchase ECO100, which is 100 percent renewable electricity, for all of its municipal accounts.

PCE also offers rebates of up to \$3,000 for heat pump water heaters, up to \$3,500 for heat pump heating, ventilation, and air conditioning (HVAC) systems, and no-cost electric appliance, energy efficiency upgrade, and home repairs to income-qualified residents of San Mateo County.

Customers have the option to opt-out of PCE renewable energy sources and receive their energy service from PG&E. PG&E is responsible for maintaining transmission lines, handling customer billing, and responding to new service requests and emergencies within the PCE service area.

PG&E is a publicly traded utility company that generates, purchases, and transmits energy under contract with the CPUC. PG&E's service territory is 70,000 square miles, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada to the Pacific Ocean. PG&E's electricity

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<sup>78</sup> City of San Mateo, 2023, Peninsula Clean Energy. <https://www.cityofsanmateo.org/3261/Peninsula-Clean-Energy> accessed on June 1, 2023.

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distribution system consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines with approximately 5.5 million electric customer accounts.<sup>79</sup>

The electricity is generated by a combination of sources such as natural gas-fired power plants, nuclear power plants, and hydro-electric dams as well as newer sources of energy such as wind turbines and photovoltaic plants, also known as solar farms. The electric grid is a network of high-voltage transmission lines that link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level and consists of overhead or underground distribution lines, transformers, and individual service “drops” that connect to the individual customer.

The power mix PG&E provided to customers in 2021 consisted of renewable resources (50 percent), nuclear (39 percent), natural gas plants (7 percent), and large hydroelectric facilities (4 percent). The renewable resources include wind, geothermal, biomass, solar, and small hydro.<sup>80</sup> PG&E also has 600 megawatts of battery storage capacity already connected to the electric grid and has contracts for an additional 3,300 megawatts of capacity by 2024.

PG&E’s projected average annual electricity demand growth (mid-demand forecast) between 2019 and 2035 is approximately 1.5 percent. Total mid-electricity consumption in PG&E’s service area was 106,617 gigawatt-hours per year in 2019 and is forecast to increase to 133,893 gigawatt-hours in 2035.<sup>81</sup> PG&E is expected to meet its electricity demands in 2035 and is ahead of schedule on meeting California’s GHG-free requirements.

In addition, the City encourages the installation of local renewable resources, such as rooftop solar energy systems, which will reduce the cost of electricity for residents and businesses and enhance the local economy. The City is also pursuing policies and building code changes that would require new and existing buildings to be all-electric and eliminate natural gas as an energy source. By expanding on-site electricity generation and storage, San Mateo will not only reduce greenhouse gas emissions but also minimize the impact of grid failures and power disruptions.

### *Natural Gas*

PG&E is also the natural gas service provider for the City of San Mateo. The natural gas system includes approximately 50,000 miles of natural gas pipelines, including 6,700 miles of transmission pipelines and 42,000 miles of distribution pipelines.<sup>82</sup> The transmission pipelines move natural gas from compressor stations and storage facilities to regulator stations. At the regulator station, the pressure in the pipeline is reduced before gas enters the distribution system, which consists of smaller diameter pipelines that

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<sup>79</sup> PG&E, 2023, Company Profile. [https://www.pge.com/en\\_US/about-pge/company-information/profile/profile.page](https://www.pge.com/en_US/about-pge/company-information/profile/profile.page) accessed on June 1, 2023.

<sup>80</sup> PG&E, 2023, PG&E’s 2021 Power Mix, [https://www.pge.com/en\\_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page](https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page), accessed June 1, 2023.

<sup>81</sup> California Energy Commission, 2023, California Energy Demand Forecast, 2021-2035, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report/2021-1>, accessed June 1, 2023.

<sup>82</sup> PG&E, 2023, PG&E Natural Gas System. [https://www.pge.com/en\\_US/safety/how-the-system-works/natural-gas-system-overview/natural-gas-system-overview.page](https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/natural-gas-system-overview.page) accessed February 18, 2023.

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deliver gas to residences and businesses. PG&E has approximately 4.5 million natural gas customer accounts.

Natural gas demand statewide is projected to decline an average of 1.1 percent per year through 2035.<sup>83</sup> This is primarily due to the goal of reducing greenhouse gas emissions and the ordinances of some cities for new construction to be all electric. Gas demand is expected to decrease from 5,298 million cubic feet of gas per day in 2022 to 4,857 million cubic feet per day by 2035. California's gas storage facilities supplement pipeline gas supply during high demand periods and also provide supply reliability. The supplies of natural gas would meet the demand through year 2035.<sup>84</sup>

### *Telecommunications and Internet Providers*

Telecommunications services include wireless internet, cell phone and land line telephone, cable television, and satellite television. There are numerous telecommunication and internet providers that serve the EIR Study Area. Telecommunication providers include AT&T, T-Mobile, Verizon, and others. Internet providers include Spectrum, Xfinity, AT&T, T-Mobile, Earthlink, and others. Multiple choices give San Mateo residents and businesses a variety of options when choosing telecommunication providers.

The wireless networks consist of fiber-optic cables that connect major internet hubs over long distances. In San Mateo County, these cables typically run north to south throughout the County. The networks can be expanded by using small cell facilities, which are small antennae placed on existing utility poles or streetlights along with small pole-mounted radios and other accessory equipment. In this manner, the fiber-optic network can be easily expanded to meet the demand for wireless services. The current infrastructure is in place and sufficient to serve existing and future customers in San Mateo and the surrounding area.

The City will continue to require franchises to underground utility service connections for new development and underground existing overhead lines, when justifiable. The City will also continue to work with PG&E and other utility providers to underground new and existing overhead infrastructure as opportunities and funding permit.

### **4.17.5.2 STANDARDS OF SIGNIFICANCE**

Implementation of the proposed project would result in significant impacts related to energy infrastructure if it would:

- Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

<sup>83</sup> California Public Utilities Commission, 2022, 2022 California Gas Report.  
[https://www.socalgas.com/sites/default/files/Joint\\_Utility\\_Biennial\\_Comprehensive\\_California\\_Gas\\_Report\\_2022.pdf](https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf) accessed June 1, 2023.

<sup>84</sup> California Public Utilities Commission, 2022, 2022 California Gas Report.  
[https://www.socalgas.com/sites/default/files/Joint\\_Utility\\_Biennial\\_Comprehensive\\_California\\_Gas\\_Report\\_2022.pdf](https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf) accessed June 1, 2023.

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- In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to electric power, natural gas, or telecommunications facilities.

### 4.17.5.3 IMPACT DISCUSSION

**UTIL-12** Implementation of the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Electrical service to the EIR Study Area would be provided by PCE and PG&E through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.17-13, *Year 2040 Forecast Electricity Consumption*, electricity use in the EIR Study Area would increase by 177,799,653 kilowatt-hours per year. However, the per person electricity use would decrease by 161 kWh per year, which reflects the replacement of existing building stock with new development that meets the California Building Energy Efficiency Standards and CALGreen standards.

**TABLE 4.17-13 YEAR 2040 FORECAST ELECTRICITY CONSUMPTION**

Land Use	Electricity Usage (kWh/year) <sup>a</sup>		
	Existing Conditions	Proposed Project	Net Change
<b>City</b>			
Residential	190,128,160	286,083,820	95,955,660
Nonresidential	333,200,500	413,129,990	79,929,490
<b>SOI</b>			
Residential	6,147,817	6,195,622	47,805
Nonresidential	5,837,058	7,703,756	1,866,698
<b>Total</b>	<b>535,313,535</b>	<b>713,113,188</b>	<b>177,799,653</b>
<b>Service Population</b>	170,460	239,400	68,940
<b>Per Service Population Annual Consumption</b>	<b>3,140</b>	<b>2,979</b>	<b>-161</b>

Note:

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As shown in Table 4.17-14, *Year 2040 Forecast Natural Gas Consumption*, natural gas use with buildout of the proposed project would increase natural gas use in the EIR Study Area by 10,391,714 therms annually, or approximately 41 percent, from existing conditions. The per service population natural gas consumption is estimated to slightly increase from 149 therms per person per year in 2019 to 150 therms per person per year in 2040. This is conservative as many projects in the city would be subject to the SMMC code's all-electric requirements.

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**TABLE 4.17-14 YEAR 2040 FORECAST NATURAL GAS CONSUMPTION**

Land Use	Natural Gas Usage (Therms per year) <sup>a</sup>		
	Existing Conditions	Proposed Project	Net Change
<b>City</b>			
Residential	15,549,930	23,397,810	7,847,880
Nonresidential	9,195,040	11,677,000	2,481,960
<b>SOI</b>			
Residential	502,809	506,719	3,910
Nonresidential	181,252	239,216	57,964
<b>Total</b>	<b>25,429,031</b>	<b>35,820,745</b>	<b>10,391,714</b>
<b>Service Population</b>	170,460	239,400	68,940
<b>Per Service Population Annual Consumption</b>	<b>149</b>	<b>150</b>	<b>1</b>

Note:

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR

These energy consumption rates are modest increases when considered in the context of PCE's and PG&E's service territories. The increase in electricity usage for the EIR Study Area is approximately 0.1 percent of PG&E's projected energy supply in 2035, and the increase in natural gas consumption for the EIR Study Area is less than 0.06 percent of PG&E's natural gas supply.<sup>85</sup> PG&E also states that there would be sufficient electrical and natural gas supplies to cover its service area in 2035.

In addition, potential future development would be required to comply with the current and future updates to the California Energy Code and the CALGreen Code, which would contribute to reducing energy demands. New buildings would also use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations, which would ensure the use of efficient electricity and natural gas consumption. New and replacement buildings in compliance with these standards would generally have greater energy efficiency than existing buildings. Also, San Mateo is in the process of requiring all-electric appliances for new development.

The Public Services and Facilities (PSF) Element of the proposed General Plan contains goals, policies, and actions that require local planning and development decisions to address efficient use of energy and energy conservation. The following General Plan 2040 goal, policies, and actions would further limit wasteful and unnecessary energy consumption:

- **Goal PSF-4:** Promote the development of a clean energy supply, energy efficient technology, and telecommunications facilities that benefit all members of the community.
  - **Policy PSF 4.1: Clean Energy.** Support the advancement of a carbon neutral energy supply.
  - **Policy PSF 4.2: Energy Conservation.** Support efforts to reduce per capita energy use.

<sup>85</sup> PG&E's projected energy supplies for electricity and natural gas do not extend beyond 2035.



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- **Policy PSF 4.3: Building Electrification.** Require electrification for new building stock and reduce fossil fuel usage for existing building stock at the time of building alteration.
- **Policy PSF 4.4: Energy Resilience.** Require new development projects to incorporate energy-efficiency measures, electric equipment, solar energy systems, and battery storage into their projects (Building Integrated Photo-Voltaic/BIPV) and encourage existing development to incorporate solar energy systems and battery storage.
- **Policy PSF 4.5: Grid Resilience.** Support PG&E's efforts to improve grid resilience and capacity to meet increased electrical demand.
- **Policy PSF 4.6: Renewable Energy Neighborhood Microgrids.** Encourage the establishment of renewable energy neighborhood microgrids to support resilience.
- **Policy PSF 4.7: Service Improvement and Expansion.** Seek to ensure adequate energy and communication systems to serve existing and future needs while minimizing impacts on existing and future residents by requiring new development to underground power lines and provide underground connections, when feasible, and prioritizing cellular coverage for all areas of the city while appropriately minimizing visual impacts of cellular facilities, antennas, and equipment shelters.
- **Policy PSF 4.8: Access and Availability.** Work with service providers to support access to and availability of a wide range of state-of-the-art telecommunication systems and services for households, businesses, institutions, and public agencies in San Mateo.
- **Policy PSF 4.9: Coordinate Infrastructure Improvements.** Combine, to the extent possible, upgrades and repairs to public infrastructure, such as roadways with utility needs, broadband upgrades, bicycle and pedestrian improvements, and levees.
- **Policy PSF 4.10: Private Utility Undergrounding.** Require new private development to underground service connections onto private property.
- **Policy PSF 4.11: Public Wi-Fi.** Provide high-speed internet access to the public at all City facilities.
- **Action PSF 4.12: Dig Once.** Establish a "dig once" policy, coordinating utility and roadway construction to avoid digging up the right-of-way multiple times, to reduce costs and impacts on the public right-of-way. The policy shall apply to infrastructure, utilities, and broadband whenever possible.
- **Action PSF 4.13: Utility Network Undergrounding.** Underground existing electrical and communication transmission and distribution lines in the public right-of-way as funds permit.
- **Action PSF 4.14: Utility Undergrounding Requirements.** Amend the San Mateo Municipal Code to require new private development to underground utilities and service connections on and adjacent to the site and to install and maintain signs, streetlights, and street landscaping adjacent to sidewalks.
- **Action PSF 4.15: Renewable Energy.** Increase new annual installations of solar or renewable energy systems. Partner with Peninsula Clean Energy to study and implement a sustainable and resilient system that can be used as a pilot program for locally generated power not reliant on outside power sources.

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- **Action PSF 4.16: Solar Energy.** Promote local partnerships and rebate opportunities that make solar and battery storage simpler and more affordable while ensuring that the permit process is quick and inexpensive.

Compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, and Renewables Portfolio Standards) would increase building energy efficiency and reduce building energy demands. Additionally, the proposed General Plan goal, policies, and actions listed above will contribute to minimizing building-related energy demands and demands on nonrenewable sources of energy. Implementation of the proposed General Plan goal, policies, and actions in conjunction with and complementary to regulatory requirements, would ensure that energy demand associated with growth under the proposed project would not be inefficient, wasteful, or unnecessary, therefore avoiding the need for new or expanded electric power and natural gas facilities. In addition, the energy providers and telecommunications providers that serve the EIR Study Area indicate that they have the capability to serve future increases in population within their service areas without significant changes to the existing infrastructure. Therefore, implementation of the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities and impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>UTIL-13</b>	<b>The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulatively considerable impact to electric power, natural gas, or telecommunications facilities.</b>
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The area considered for cumulative impacts are the service areas of PCE and PG&E for electricity and PG&E for natural gas. Other projects within the service areas would increase electricity and natural gas demands.

The CPUC has identified the Integrated Energy Policy Report as “the appropriate venue for considering issues of load forecasting, resource assessment, and scenario analyses, to determine the appropriate level and ranges of resource needs for load serving entities in California.” The latest report shows that California’s electricity sector is leading efforts to reduce GHG emissions and there has been an increase in electricity consumption of only 10 percent while California’s economy grew by 54 percent between 2000 and 2018.<sup>86</sup> Natural gas consumption is expected to level out between 2020 and 2030 with no significant increase due to energy savings from new building standards and the implementation of city and county ordinances that require new construction to have all-electric appliances and heating.

In addition, all future projects developed within the PCE and PG&E service areas would implement the requirements of the California Energy Code and CALGreen Building Code. New buildings would also use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations. Counties and cities review project design plans against these codes and ensure compliance before issuing

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<sup>86</sup> California Energy Commission, 2020. Adopted 2019 Integrated Energy Policy Report.

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construction permits. These measures would reduce the overall consumption of electricity and natural gas.

The energy providers and telecommunications providers that serve the EIR Study Area indicate that they have the capability to serve future increases in population within their service areas without significant changes to the existing infrastructure. In addition, the proposed General Plan includes goal, policies, and actions that would contribute to minimizing inefficient, wasteful, or unnecessary energy consumption and ensure compliance with State, regional, or local plans for renewable energy, therefore avoiding the need for new or expanded electric power and natural gas facilities. Therefore, the proposed project would not result in a cumulatively considerable impact to electric power, natural gas, or telecommunication facilities and cumulative impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

## 4.18 WILDFIRE

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential wildfire impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan update, and from future development and activities that could occur under the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by a discussion of potential impacts and cumulative impacts related to implementation of the proposed project.

### 4.18.1 ENVIRONMENTAL SETTING

#### 4.18.1.1 REGULATORY FRAMEWORK

##### Federal Regulations

###### *National Cohesive Wildfire Management Strategy*

In the Federal Land Assistance, Management, and Enhancement Act of 2009 (FLAME Act), Congress mandated the development of a National Cohesive Wildland Fire Management Strategy for all lands in the United States. Wildfire management is guided by the National Cohesive Wildland Fire Management Strategy, which has three primary goals:<sup>1</sup>

- Resilient landscapes
- Fire adapted communities
- Safe and effective wildfire response

These three goals enable land managers to manage vegetation and fuels; protect homes, communities, and other values at risk; manage human-caused ignitions; and effectively and efficiently respond to wildfires. California is part of the Western Regional Strategy Committee, chartered to support and facilitate the implementation of the National Cohesive Wildland Fire Strategy.

###### *National Fire Protection Association Standards*

National Fire Protection Association (NFPA) codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. NFPA standards are recommended (advisory) guidelines for fire protection that are referenced in the California Fire Code (CFC), which is adopted by the San Mateo Consolidated Fire Department (SMC Fire) every three years. Specific standards applicable to wildland fire hazards include, but are not limited to:

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<sup>1</sup> United States Department of the Interior and United States Department of Agriculture, April 2014, *National Cohesive Wildland Fire Management Strategy*, <https://www.forestsandrangelands.gov/documents/strategy/strategy/CSPHaseIIINationalStrategyApr2014.pdf>, accessed December 15, 2022.

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- **NFPA 1141**, Fire Protection Infrastructure for Land Development in Wildlands
- **NFPA 1142**, Water Supplies for Suburban and Rural Fire Fighting
- **NFPA 1143**, Wildland Fire Management
- **NFPA 1144**, Reducing Structure Ignition Hazards from Wildland Fire
- **NFPA 1710**, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations

## State Regulations

### *California Department of Forestry and Fire Protection*

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. CAL FIRE provides fire assessment and firefighting services for land in State Responsibility Areas (SRA), conducts educational and training programs, provides fire planning guidance and mapping, and reviews general plan safety elements to ensure compliance with State fire safety requirements. CAL FIRE staff, or a designee, also reviews building permit applications, parcel maps, and use permits for construction or development in SRAs and Local Responsibility Areas (LRA).

The Board of Forestry and Fire Protection is a government-appointed approval body within CAL FIRE. It is responsible for developing the general forest policy of the State, determining the guidance policies of CAL FIRE, and representing the State's interest in federal forestland in California. The Board of Forestry and Fire Protection also promulgates regulations and approves general plan safety elements that are adopted by local governments for compliance with State statutes.

The California Office of the State Fire Marshal supports the mission of CAL FIRE by focusing on fire prevention. These responsibilities include regulating buildings in which people live, congregate, or are confined; controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death and destruction by fire; providing statewide direction for fire prevention within wildland areas; regulating hazardous liquid pipelines; developing and renewing regulations and building standards; and providing training and education in fire protection methods and responsibilities. These are accomplished through major programs including engineering, education, enforcement, and support from the Board of Forestry and Fire Protection. For jurisdictions in State Responsibility Area (SRAs) or very high fire hazard severity zones (VHFHSZs), the Land Use Planning Program division of the Office of State Fire Marshal reviews safety elements during the update process to ensure consistency with California Government Code, Section 65302(g)(3).

Together, the Board of Forestry and Fire Protection, Office of State Fire Marshal, and CAL FIRE protect and enhance the forest resources of all wildland areas of California that are not under federal jurisdiction.

### Fire Hazard Severity Zones and Responsibility Areas

CAL FIRE designates fire hazard severity zones (FHSZ) as authorized under California Government Code Sections 51175 et seq. FHSZs may be designated Very High, High, or Moderate. CAL FIRE considers many

factors when designating fire severity zones, including fire history, existing and potential vegetation fuel, flame length, blowing embers, terrain, and weather patterns for the area. CAL FIRE designates FHSZ in two types of areas depending on which level of government is financially responsible for fire protection:

- **Local Responsibility Area (LRA):** Incorporated communities are financially responsible for wildfire protection.
- **State Responsibility Area (SRA):** CAL FIRE and contracted counties are financially responsible for wildfire protection.

### CAL FIRE Strategic Plan

CAL FIRE produced the 2018 *Strategic Fire Plan for California*, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments.<sup>2</sup> The 2018 *Strategic Fire Plan for California* focuses on fire prevention and suppression activities to protect lives, property, and ecosystems, in addition to providing natural resource management to maintain State forests as a resilient carbon sink to meet California's climate change goals. A key component of the 2018 *Strategic Fire Plan for California* is the collaboration between communities to ensure fire suppression and natural resource management is successful.<sup>3</sup>

### *2021 California's Wildfire and Forest Resilience Action Plan*

The Governor's Forest Management Task Force developed California's Wildfire and Forest Resilience Action Plan, which is a framework for establishing healthy and resilient forests that can withstand and adapt to wildfire, drought, and climate change. The Wildfire and Forest Resilience Action Plan accelerates efforts to restore the health and resilience of California's forests, grasslands, and natural places; improves the fire safety of communities; and sustains the economic vitality of rural forested areas. CAL FIRE, in partnership with the US Forest Service, intends to scale up forest thinning and prescribed fire; integrate climate adaptation into the statewide network of regional forest and community fire resilience plans; improve the electricity grid resilience; and promote sustainable land use.

### *State Responsibility Area and Very High Fire Hazard Severity Zone Fire Safe Regulations*

California Code of Regulations (CCR) Title 14, Division 1.5, Chapter 7, Subchapter 2, *SRA/VHFHSZ Fire Safe Regulations*, establishes minimum wildfire protection standards for construction and development within the SRA and VHFHSZ and requires CAL FIRE to review development proposals and enact recommendations that serve as conditions of approval in these zones. These regulations apply to all residential, commercial, and industrial buildings in the VHFHSZ and all tentative and parcel maps. These standards include basic emergency access and perimeter wildfire protection measures, signing and building numbering, private water supply resources for emergency fire use, and vegetation modification.

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<sup>2</sup> California State Board of Forestry and Fire Protection, 2018, *2018 Strategic Fire Plan for California*, <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/fire-plan/>, accessed April 11, 2023.

<sup>3</sup> California State Board of Forestry and Fire Protection, 2018, *2018 Strategic Fire Plan for California*, <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/fire-plan/>, accessed April 11, 2023.



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Fire Safe Regulations also include a minimum setback of 30 feet for all buildings from property lines and/or the center of a road. Section 1273.08, *Dead-End Roads*, of these standards provide regulations for the maximum lengths of single-access roadways requiring the following:

- Parcels zoned for less than 1 acre: 800 feet
- Parcels zoned for 1 to 4.99 acres: 1,320 feet
- Parcels zoned for 5 to 19.99 acres: 2,640 feet
- Parcels zoned for 20 acres or larger: 5,280 feet

Fire Safe Regulations, Section 1299.03, *Fire Hazard Reduction Around Buildings and Structure Requirements*, provides defensible space requirements for areas within 30 feet of a structure (Zone 1) and between 30 and 100 feet from a structure (Zone 2). In Zone 1, all dead and dying plants must be removed as must any flammable vegetation that could catch fire. In Zone 2, horizontal and vertical spacing among shrubs and trees must be created and maintained.

### *Public Resources Code Section 4291*

Public Resources Code (PRC) Section 4291, *Mountainous, Forest-, Brush- and Grass-Covered Lands*, is intended for any person who owns, lease, controls, operates, or maintains a building or structure in a mountainous area, forest-covered lands, shrub-covered lands, grass-covered lands, or land that is covered with flammable material, regardless of whether the property is in an SRA or VHFHSZ. This section requires defensible space to be maintained within 100 feet from each side of a structure. An ember-resistant zone is also required within 5 feet of a structure and more intense fuel reduction between 5 and 30 feet of a structure.

### *California Building Code*

#### Building Design Standards

The State of California provides a minimum standard for building design through CCR Title 24, Part 2, commonly referred to as the “California Building Code” (CBC). The CBC is updated every three years. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. The City of San Mateo regularly adopts each new CBC update under the San Mateo Municipal Code (SMMC) Chapter 23.08, *Building Code*. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC and any applicable local amendments. Typical fire safety requirements of the CBC include the installation of sprinklers in all buildings and other facilities; the establishment of fire-resistance standards for fire doors, building materials, and particular types of construction in high FHSZs; requirements for smoke-detection systems; exiting requirements; and the clearance of debris.

#### Materials and Methods for Exterior Wildfire Exposure

Chapter 7A, *Materials and Methods for Exterior Wildfire Exposure*, of the CBC prescribes building materials and construction methods for new buildings in a FHSZ or Wildland Interface Fire Area. Chapter 7A contains requirements for roofing; attic ventilation; exterior walls; exterior windows and glazing;

exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures. Other requirements include vegetation management compliance, as prescribed in CFC Section 4906 and PRC 4291.

### *California Fire Code*

The CFC incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official fire code for the State and all political subdivisions. It is found in CCR Title 24, Part 9, and, like the CBC, it is revised and published every three years by the California Building Standards Commission. Also like the CBC, the CFC is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions. The San Mateo Consolidated Fire Department, the City's fire service provider, regularly adopts each new CFC update under the *San Mateo Consolidated Fire Department Fire Code*. The CFC is a model code that regulates minimum fire safety regulations for new and existing buildings; facilities; storage; processes, including emergency planning and preparedness; fire service features; fire protection systems; hazardous materials; fire flow requirements; and fire hydrant locations and distribution. Typical fire safety requirements include installation of sprinklers in all buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

### Fire Safety During Construction and Demolition

Chapter 33 of the CFC, *Fire Safety During Construction and Demolition*, provides requirements for fire safety precautions during construction and demolition of a development project. The purpose of this chapter is to provide reasonable safety to life and property from fire during construction and demolition operations, including those in underground locations. Specific requirements include a prohibition of smoking on-site, except for in approved areas; management of combustible materials and debris; cutting and welding; electrical wiring; and cooking. Additional requirements include the preparation of site safety plans prior to building permit issuance, providing fire watch during nonworking hours, and maintaining water supply for fire protection as soon as combustible materials arrive on a project site.

### Wildland-Urban Interface Areas

Chapter 49, *Requirements for Wildland-Urban Interface Fire Areas*, of the CFC applies to any geographical area identified as a FHSZ by CAL FIRE or by a local agency. It defines FHSZs, connects to the SRA/VHFHSZ Fire Safe Regulation requirements for defensible space, and parallels requirements for wildfire protection buildings construction and hazardous vegetation fuel management in other sections of the CCR and the PRC. Chapter 49 of the 2022 CFC includes a definition for the Wildland-Urban Interface (WUI) and provides requirements for fire protection plans, landscape plans, long-term vegetation management, and creation and maintenance of defensible space for all new development within the WUI. SMC Fire has modified these regulations in their adoption of the CFC and has also adopted and modified the IWUIC.

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### *California Public Utilities Commission*

In 2007, wildfires in southern California were ignited by overhead utility power lines and aerial communication facilities near power lines. In response, the California Public Utilities Commission (CPUC) began considering and adopting regulations to protect the public from fire hazards due to overhead power lines and nearby aerial communication facilities. The CPUC published a Fire Threat Map under Rulemaking 15-05-006, following procedures in Decision 17-01-009, revised by Decision 17-06-024, which adopted a work plan for the development of a utility High Fire Threat District where enhanced fire safety regulations in Decision 17-12-024 apply.<sup>4</sup> The fire regulations require electric utilities to:<sup>5</sup>

- Prioritize the correction of safety hazards.
- Correct nonimmediate fire risks in “Tier 2” (elevated fire threat) areas on the CPUC High Fire-Threat District within 12 months, and in “Tier 3” (extreme fire threat) areas within 6 months.
- Maintain increased clearances between vegetation and power lines within the High Fire Threat District.
- Maintain stricter wire-to-wire clearances for new and reconstructed facilities in Tier 3 areas.
- Conduct annual inspections of overhead distribution facilities in rural areas of Tier 2 and Tier 3 areas.
- Prepare a fire prevention plan annually if overhead facilities exist in the High Fire Threat District.

### *California Government Code*

California Government Code Section 65302(g) and Section 65302.15 require that safety elements be reviewed and revised as needed with the revision of a housing element or local hazard mitigation plan, but no less than every eight years, to ensure the goals, policies, actions, mapping, and background content are consistent with State regulations and reflect the best available information for wildfire risks, climate adaptation and resiliency, and emergency evacuation routes for certain residential areas. Communities with local hazard mitigation plan updates after January 1, 2022, must also ensure their safety elements or local hazard mitigation plans include an assessment of evacuation routes and their capacity, safety, and viability as well as evacuation locations under a range of emergency scenarios.

For wildfire and evacuation purposes, a safety element must:

- Identify wildfire hazards with the latest fire severity zone maps from the Board of Forestry and Fire Protection, US Geological Survey, and other sources.
- Consider guidance given by the Office of Planning and Research’s Fire Hazard Planning document.
- Demonstrate that the jurisdiction or contract agency and associated codes satisfactorily address adequate water supply, egress requirements, vegetation management, street signage, land use policies, and other criteria to protect from wildfires.

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<sup>4</sup> California Public Utilities Commission, revised August 19, 2021, CPUC Fire-Threat Map, [https://files.cpuc.ca.gov/safety/fire-threat\\_map/2021/CPUC%20Fire%20Threat%20Map\\_v.3\\_08.19.2021.Poster%20Size.pdf](https://files.cpuc.ca.gov/safety/fire-threat_map/2021/CPUC%20Fire%20Threat%20Map_v.3_08.19.2021.Poster%20Size.pdf), accessed August 31, 2022.

<sup>5</sup> California Public Utilities Commission, December 14, 2017, *Press Release: CPUC Adopts New Fire-Safety Regulations*, <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K352/201352402.PDF>, accessed August 31, 2022.

- Establish in the safety element (and other elements that must be consistent with it) a set of comprehensive goals, policies, and feasible implementation measures for protection of the community from unreasonable risks of wildfire.
- Identify evacuation-constrained residential parcels in hazard-prone areas.

### *Governor's Office of Planning and Research Fire Hazard Planning Technical Advisory*

The Governor's Office of Planning and Research published the Fire Hazard Technical Advisory in 2015 and revised it in 2022 as a planning guide for addressing fire hazards, reducing risk, and increasing resilience across California's diverse communities and landscapes. The Fire Hazard Technical Advisory provides a range of goals, policies, and programs for fire hazard prevention and mitigation, disaster preparedness, and emergency response and recovery. The 2022 update includes specific land use strategies to reduce fire risk to buildings, infrastructure, and communities.

### *California Environmental Quality Act*

In November 2022 the California Attorney General issued the Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act. This guidance document was designed to help lead agencies comply with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) when considering whether to approve projects in wildfire-prone areas. These areas are often in the WUI area—i.e., the area where the built environment meets or intermingles with the natural environment. This guidance provides suggestions for how best to comply with CEQA when analyzing and mitigating a proposed project's impacts on wildfire ignition risk, emergency access, and evacuation. The guidance is aimed at proposed development projects, such as residential, recreational, or commercial developments. The extent to which it applies varies by project based on project design and location. It does not impose additional requirements on local governments or alter any applicable laws or regulations but is intended to provide guidance on some of the issues, alternatives, and mitigation measures that should be considered during the environmental review process.

## Regional Regulations

### *San Mateo – Santa Cruz Unit Strategic Fire Plan*

CAL FIRE developed the *San Mateo – Santa Cruz Unit 2022 Strategic Fire Plan*, adopted in 2022, which covers an approximately 894-square-mile area and protects 572,160 acres of the SRA in both San Mateo and Santa Cruz Counties.<sup>6</sup> The goal of this plan is to outline resource needs in the area. This is done by creating a list of all the initial attack resources in the unit and expanding these resources in at-risk communities. There is also an education section in the plan that encourages teaching the community at formal events and meetings.

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<sup>6</sup> California Department of Forestry and Fire Protection, updated May 2022, *San Mateo – Santa Cruz Unit: 2022 Strategic Fire Plan*, <https://osfm.fire.ca.gov/media/lznihvwb/2022-san-mateo-santa-cruz-san-fransisco-unit-fire-plan.pdf>, accessed August 17, 2022.

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### *Santa Cruz San Mateo County Community Wildfire Protection Plan*

The *Santa Cruz San Mateo County Community Wildfire Protection Plan* (CWPP) identifies the risks created by wildfire across the landscape and provides strategies to mitigate wildfire risks and restore healthier, more resilient ecosystems and communities. The 2018 Santa Cruz San Mateo County CWPP was developed through a collaborative effort with CAL FIRE's San Mateo and Santa Cruz Unit, the Resource Conservation District for San Mateo County and Santa Cruz County, the San Mateo Resource Conservation District, and the US Fish and Wildlife Service. The primary component of fire prevention in this plan is reducing structural ignitability through construction methods and materials, education, and defensible space. Additional methods include fuel reduction projects, shaded fuel breaks, and closing the gap on data needs for future vegetation management programs.

### *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan*

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The *San Mateo County Multi-Jurisdictional Hazard Mitigation Plan* (MJHMP), updated in 2021 in accordance with the federal Disaster Mitigation Action of 2000 (DMA 2000), provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term risk to people and property from these hazards. The San Mateo Jurisdictional Annex of the MJHMP provides an assessment of hazards and vulnerabilities, and a set of mitigation actions for San Mateo specifically while considering the results from the countywide effort. In the context of an MJHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including wildfire. Mitigation actions related to wildfire in the San Mateo Jurisdictional Annex of the MJHMP include adopting the most recent California Building Standards Code, conducting annual inspections of businesses and multi-family dwellings for fire safety requirements, and adopting best practices for evacuation planning.

The MJHMP must be reviewed and approved by the Federal Emergency Management Agency (FEMA) every five years to maintain eligibility for disaster relief funding. As part of this process, the California Governor's Office of Emergency Services reviews all local hazard mitigation plans in accordance with DMA 2000 regulations and coordinates with local jurisdictions to ensure compliance with FEMA's Local Mitigation Plan Review Guide. As part of the proposed project, the MJHMP is adopted in its entirety into the proposed Safety Element by reference.

## Local Regulations

### *San Mateo General Plan 2030*

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to wildfire are primarily in the Safety Element. As part of the proposed project, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added. Applicable goals, policies, and actions are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.18.3, *Impact Discussion*.

### *City of San Mateo Municipal Code*

The SMMC includes various directives pertaining to wildfire. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to wildfire impacts are included in Title 23, *Building and Construction*.

- Chapter 23.08, *Building Code*, adopts the 2022 CBC as the rules, regulations, and standards within the City as to all matters except as modified or amended in the SMMC.
- Chapter 23.28, *Fire Code*, adopts the 2022 edition of the CFC as the rules, regulations, and standards within the City as to all matters except as modified or amended in the SMMC. This Fire Code is adopted and enforced by the SMC Fire. As stated in Section 27.56.150, *Fire and Explosive Hazards*, fire and explosive hazards are subject of the fire prevention regulations in Chapter 23.28 of the SMMC.
- Chapter 23.33.010, *Floodplain Management*, provides development standards to minimize public and private losses due to flood conditions. This chapter of the SMMC provides provisions for flood hazard reduction, as well as alternative design standards for development in floodplains.
- Chapter 27.83, *Slope and Hillside Development Standards*, prohibits subdivisions that result in new parcels with slopes of twenty-five percent or more, unless specific conditions are met.

## 4.18.1.2 EXISTING CONDITIONS

### Wildfire Background

The term “wildfire” refers to fires that usually result from the ignition of dry grass, brush, or timber. Historically, wildfires commonly occurred in steep or heavily vegetated areas, which makes suppression of the fire difficult. More recently, wildfires have been encroaching into more urban areas, that is, the WUI, threatening homes, businesses, and essential infrastructure. Though wildfires play an important role in the ecology of many natural habitats, risks to human safety and property increase as urban development moves into areas susceptible to wildfire hazards.



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### *Types of Wildfires*

There are three basic types of wildland fires:<sup>7</sup>

- **Crown fires** burn trees to their tops; these are the most intense and dangerous wildland fires.
- **Surface fires** burn surface litter and duff. These are the easiest fires to extinguish and cause the least damage to the forest. Brush and small trees enable surface fires to reach treetops and are thus referred to as *ladder fuels*.
- **Underground fires** occur underground in deep accumulations of dead vegetation. These fires move very slowly but can be difficult to extinguish.

Wildfires burn in many types of vegetation—forest, woodland, scrub (including chaparral and sage scrub), and grassland. Many species of native California plants are adapted to fire and habitats such as woodlands, chaparral, and grasslands can recover from fire. For example, some species of chaparral plants, such as ceanothus, require intense heat for germination and therefore have flammable resins on leaves and roots that can quickly sprout up in burned areas.<sup>8</sup> Between 2010 and 2017, wildfires in California burned about 265,000 acres of forest land, 207,000 acres of scrub vegetation, 99,000 acres of grassland, 18,000 acres of desert vegetation, and 14,000 acres of other vegetation types.<sup>9</sup> Wildfires have been observed to be more frequent and growing in intensity over the past several years, with 4,304,379 acres and 2,569,386 acres burning in 2020 and 2021, respectively.<sup>10</sup>

### *Wildfire Causes*

Although the term *wildfire* suggests natural origins, a 2017 study that evaluated 1.5 million wildfires in the United States between 1992 and 2012 found that humans were responsible for igniting 84 percent of wildfires, accounting for 44 percent of acreage burned.<sup>11</sup> The three most common types of causes of human-caused wildfires are debris burning (logging slash, farm fields, trash, etc.); arson; and equipment

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<sup>7</sup> Natural Resources Canada, 2021, Fire Behavior, <https://www.nrcan.gc.ca/forests/fire-insects-disturbances/fire/13145>, accessed August 2, 2022.

<sup>8</sup> National Park Service, 2018, “Wildland Fire in Chaparral: California and Southwestern United States,” <https://www.nps.gov/articles/wildland-fire-in-chaparral.htm>.

<sup>9</sup> State Board of Forestry and Fire Protection and California Department of Forestry and Fire Prevention, August 2018, 2018 *Strategic Fire Plan for California*, [https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08\\_22\\_18.pdf](https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf), accessed August 2, 2022.

<sup>10</sup> CAL FIRE, “Acres Burned vs Structures Destroyed,” <https://34c031f8-c9fd-4018-8c5a-4159cdf6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/images---misc/acres-burned-vs-structures-destroyed2022.jpg?rev=f043785e8027411caa4a6c8b176a4e26&hash=DDC50776FEF6C19D8619CA6337CF2481>, accessed May 30, 2023.

<sup>11</sup> Balch, Jennifer; Bradley, Bethany; Abatzoglou, John, et. al., January 2017, *Human-Started Wildfires Expand the Fire Niche Across the United States*, <https://www.pnas.org/content/pnas/114/11/2946.full.pdf>, accessed August 2, 2022.

use.<sup>12,13</sup> Lightning is a major natural cause of wildfire in the United States, with more than 40 percent of wildfires in the western United State caused by lightning between 1992 and 2015.<sup>14,15</sup>

Power lines can ignite wildfires several ways, including:<sup>16</sup>

- Downed lines: downed power lines can produce arcing that can cause the powerlines to spark and ignite vegetation.
- Vegetation contact: a branch contacting two conductors for a sufficient duration may ignite the branch; a tree falling on a line can cause a downed line.
- High winds and severe weather: conductors can slap together during high winds and severe weather, creating arcing of the powerlines and ejecting hot metal particles that can ignite flammable matter on the ground.
- Equipment failures: As circuit components deteriorate, they can arc and spark and thus ignite nearby flammable matter.

An analysis of US Forest Service wildfire data from 1986 to 1996 determined that 95 percent of human-caused wildfires, and 90 percent of all wildfires, occurred within 0.5 mile of a road; and that about 61 percent of all wildfires and 55 percent of human-caused wildfires occurred within approximately 650 feet (200 meters) of a road.<sup>17</sup> The study concluded that the increase in human-caused ignition from new roads greatly outweighs the benefits of increased access for firefighters.

Wildfires ignite structures in three ways: burning embers landing on the structure or flammable material next to the structure, direct flame contact, and radiant heat from fire close to the structure. Embers are the most common cause of home ignition. Embers ignite structures by entering through attic vents, igniting flammable materials around the home (litter in the roof gutter; wood stacks; or wood fencing), or finding their way under roofing materials.<sup>18</sup>

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<sup>12</sup> Pacific Biodiversity Institute, May 2007, *Roads and Wildfires*, [http://www.pacificbio.org/publications/wildfire\\_studies/Roads\\_And\\_Wildfires\\_2007.pdf](http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf), accessed August 2, 2022.

<sup>13</sup> Miscellaneous human activities (unspecified) are ranked above equipment use in percentage of wildfires caused.

<sup>14</sup> Balch, Jennifer; Bradley, Bethany; Abatzoglou, John, et. al., January 2017, *Human-Started Wildfires Expand the Fire Niche Across the United States*, <https://www.pnas.org/content/pnas/114/11/2946.full.pdf>, accessed August 2, 2022.

<sup>15</sup> Cart, Julie. 2023. CAL MATTERS, "Lightning could spark more Californai fire as world warms," <https://calmatters.org/environment/2021/09/california-fires-lightning/>, accessed July 10, 2023.

<sup>16</sup> Texas Wildfire Mitigation Project, 2014, *How Do Power Lines Cause Wildfires?* <https://wildfiremitigation.tees.tamus.edu/faqs/how-power-lines-cause-wildfires>, accessed August 2, 2022.

<sup>17</sup> Pacific Biodiversity Institute, May 2007, *Roads and Wildfires*, [http://www.pacificbio.org/publications/wildfire\\_studies/Roads\\_And\\_Wildfires\\_2007.pdf](http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf), accessed August 2, 2022.

<sup>18</sup> California Chaparral Institute, *Protecting Your Home from Fire*, <https://www.californiachaparral.org/fire/protecting-your-home/>, accessed August 2, 2022.

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CAL FIRE estimated in 2010 that there were about three million housing units in California in FHSZs and potentially at risk from wildland fire—that is, just over 20 percent of the total housing units in the state.<sup>19</sup>

According to CAL FIRE data, approximately 95 percent of structures seriously damaged in California wildfires from 2013 to 2020 took place in FHSZs in the SRA or LRA, or on federal lands.<sup>20</sup>

### *Wildland-Urban Interface*

A WUI is any area where structures and other human developments meet or intermingle with wildland vegetative fuels – shrubs, trees, and grasses. Developments in the WUI exacerbate fire occurrence and fire spread in several ways:

- Increased numbers of people near and in wildland areas, creating more frequent human-caused wildfires.
- Wildfires become harder to fight due to simultaneous evacuation and firefighting resources diverted from containing the wildfire to protecting lives and homes.
- Letting natural fires burn becomes impossible; leading to buildup of fuel in brush and forested areas and overgrowth of grasslands, increasing wildfire hazard further.<sup>21</sup>

### *Secondary Effects*

Secondary effects of wildfire include additional hazards such as landslides, poor air quality, and power outages. This section describes potential secondary hazards.

Post-fire landslide hazards include fast-moving, highly destructive debris flows that can occur in the years immediately after wildfires in response to high-intensity rainfall events, and flows that are generated over longer time periods that are accompanied by root decay and loss of soil strength. Post-fire debris flows are particularly hazardous because they can occur with little warning, exert great impulsive loads on objects in their paths, strip vegetation, block drainage ways, damage structures, and endanger human life. Debris flows differ from mudflows in that debris flows are composed of larger particles.

Fires increase the potential for debris flows in two ways:<sup>22</sup>

- Fires may bake soil into a hard crust that repels water; and

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<sup>19</sup> State Board of Forestry and Fire Protection and California Department of Forestry and Fire Prevention, August 2018, *2018 Strategic Fire Plan for California*, [https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08\\_22\\_18.pdf](https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf), accessed August 2, 2022.

<sup>20</sup> CapRadio, December 2021, After years of delays, CalFire says updated and expanded wildfire hazard maps are on their way, <https://www.capradio.org/articles/2021/12/20/after-years-of-delays-calfire-says-updated-and-expanded-wildfire-hazard-maps-are-on-their-way/>, accessed August 2, 2022.

<sup>21</sup> Radeloff, Volker; Helmers, David; Kramer, H., et al., February 2018, *Rapid Growth of the US Wildland-Urban Interface Raises Wildfire Risk*, <https://www.pnas.org/content/pnas/115/13/3314.full.pdf>, accessed August 2, 2022.

<sup>22</sup> United States Geological Survey, November 2018, New post-wildfire resource guide now available to help communities cope with flood and debris flow danger, [https://www.usgs.gov/center-news/post-wildfire-playbook?qt-news\\_science\\_products=1#qt-news\\_science\\_products](https://www.usgs.gov/center-news/post-wildfire-playbook?qt-news_science_products=1#qt-news_science_products), accessed August 2, 2022.

- Destroying vegetation that would slow and absorb rainfall, and whose roots would help stabilize soil.

Post-fire debris flows are most common in the two years after a fire; they are usually triggered by heavy rainfall. It takes much less rainfall to trigger debris flows from burned basins than from unburned areas. In southern California, as little as 0.3 inches of rainfall in 30 minutes has triggered debris flows, and any storm that has intensities greater than about 0.4 inches per hour can produce debris flows.<sup>23</sup> The burning of vegetation and soil on slopes more than doubles the rate that water will run off into watercourses. As discussed in Chapter 4.6, *Geology and Soils*, of this Draft EIR, landslides and debris flows have the potential to occur in the EIR Study Area, most notably on the steeper slopes that lie on the southwestern edge of the EIR Study Area. In these areas, landslides are commonly associated with slopes underlain with Franciscan sheared rock (mélange) and pre-existing landslide deposits.<sup>24</sup>

In addition to damaging natural environments, wildfires can injure and kill residents and firefighters as well as damage or destroy structures and personal property. Wildfires also deplete water reserves, down power lines, disrupt communication services, and block evacuation routes, which can isolate neighborhoods. Wildfires can also indirectly cause flooding if flood control facilities become inadequate to handle increases in stormwater runoff, sediment, and debris that are likely to be generated from burn scars.

Regionally, smoke from wildfires creates poor air quality that can last for days or weeks, depending on the scale of the wildfire and wind patterns. Smoke itself is made up of a complex mixture of gases and fine particles produced when wood and other organic materials burn. Health risks from smoke inhalation are largely from microscopic particles (PM<sub>2.5</sub>) that can penetrate the lungs and cause a range of health problems, including chronic heart and lung diseases. Exposure to particulate pollution is even linked to premature death. There are some populations that are more sensitive than others to smoke—for instance, people with heart or lung diseases, the elderly, children, people with diabetes, people with compromised immune systems, and pregnant women.<sup>25</sup> Through observations of wildfires, experts have determined that wildfires which produce large plumes of smoke can result in that smoke and ash being carried thousands of miles from the burn area of the wildfire. Therefore, air pollution is a major secondary risk from wildfires in the region.<sup>26</sup>

## Wildfire in the EIR Study Area

The EIR Study Area is in both an LRA and SRA. As shown in Figure 4.18-1, *Fire Hazard Severity Zones*, portions along the southwestern boundary of the city are classified as VHFHSZ within an LRA. Figure

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<sup>23</sup> United States Geological Survey, California Water Science Center, October 2018, Post-Fire Flooding and Debris Flow, <https://ca.water.usgs.gov/wildfires/wildfires-debris-flow.html>, accessed August 2, 2022.

<sup>24</sup> Association of Bay Area Governments, 2023, MTC/ABAG Hazard Viewer Map, Landslide Hazard (Rainfall Induced), <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed May 26, 2023.

<sup>25</sup> US Geological Survey, 2018, How Smoke Fires Can Affect Your Health, <https://www.epa.gov/pm-pollution/how-smoke-fires-can-affect-your-health>, accessed on April 12, 2023.

<sup>26</sup> Nasa Earth Observatory, August 2018, Smoky Skies in North America, <https://earthobservatory.nasa.gov/images/92612/smoky-skies-in-north-america>, accessed on April 12, 2023.

## WILDFIRE

4.18-1 also shows lands in the Sphere of Influence south and west of the City Limits in the VHFHSZ of the SRA. The SRA land adjacent but outside of the EIR Study Area are classified as very high, high, and moderate along Interstate 280. As shown in Figure 4.18-2, *Proposed Land Use Designations in Very High Fire Hazard Severity Zones*, primary General Plan 2040 land use designations within the VHFHSZ include Residential Very Low, Residential Low, Residential Medium, Neighborhood Commercial, Parks/Open Space, Quasi-Public, and Utilities. Development type, density, and intensity would remain the same between the existing land uses and the proposed General Plan 2040 land use designations.

Similar to the CAL FIRE VFHSZ classification, portions along the southwestern boundary of the City Limits are classified as a Tier 2 CPUC High Fire Threat District, as shown in Figure 4.18-3, *CPUC High Fire Threat District*.

The SMC Fire WUI areas within and around the EIR Study Area are shown in Figure 4.18-4, *Wildland-Urban Interface*. The southern and western portions of the city are within Interface Risk and Wildland Risk areas. SMC Fire has separated WUI areas into Interface Risk and Wildland Risk categories. The interface zone contains dense housing or other structures next to vegetation, but has little wildland vegetation that can burn in a wildfire. The wildland zones have higher concentrations of wildland vegetation with fewer structures and may have limited access and/or steeper terrain that makes controlling wildfires more difficult. The wildland zones are in and near Laurelwood Park and in open space areas near the Peninsula Golf & Country Club. The interface zones border the park and open space areas and include residential neighborhoods, roadways, and other infrastructure throughout west and southwestern parts of San Mateo. General Plan Land Use Study Area 6 is within the WUI and contains executive office, medium density multi-family, low density multi-family, and neighborhood commercial land uses.

### *Factors Influencing Wildfire*

Several factors influence wildfire conditions and facilitate the spread of wildfires, including weather conditions, fuels, topography, and climate change. Human actions are also the leading cause of wildfires in California, increasing the risk of wildfire devastating natural lands and communities. This section describes these five factors in the context of San Mateo.

### Weather

The climate in San Mateo is generally referred to as “Mediterranean,” with hot, dry summers and cool, wet winters. The weather is generally mild throughout the year. Due to the proximity of the Pacific Ocean and San Francisco Bay, fog and overcast conditions are common in the morning and evening.<sup>27</sup> The city receives an average of approximately 20 inches of precipitation annually.<sup>28</sup> Because the summer months are generally hot and dry, the risk of wildfires has historically been greatest in summer and fall.

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<sup>27</sup> California Department of Forestry and Fire Protection, updated May 2022, *San Mateo – Santa Cruz Unit: 2022 Strategic Fire Plan*, <https://osfm.fire.ca.gov/media/lznihvwb/2022-san-mateo-santa-cruz-san-fransisco-unit-fire-plan.pdf>, accessed August 17, 2022.

<sup>28</sup> Cal-Adapt, 2022, Annual Averages, <https://cal-adapt.org/tools/annual-averages/>, accessed December 16, 2022.

Relative humidity is also an important fire-related weather factor. As humidity levels drop, the dry air causes vegetation moisture levels to decrease, thereby increasing the likelihood that plant material will readily ignite and burn; the risk of wildfire increases when lightning strikes occur during dry periods.

Wind is a major weather factor of wildfire behavior. Average wind speeds in San Mateo vary only slightly throughout the year, with the windier part of the year occurring from February to July with average wind speeds of 8.8 miles per hour and the calmer part of the year occurring from July to February with average wind speeds of 7.6 miles per hour.<sup>29</sup> Wind is most commonly from the west from February to November, with winds from the north from November to February.<sup>30</sup>

Diablo winds, which are a type of downslope, warm, northerly to northeasterly wind, flow over the Diablo Mountain range, and have had reported speeds of up to 100 miles per hour.<sup>31</sup> As wind speeds increase, the rate of fire spread, intensity, and ember spread potential also increases. Gustly and erratic wind conditions can cause a wildfire to spread irregularly, making it difficult to predict its path and effectively deploy fire suppression forces. Winds from the northeast in the late summer and fall compound with lower relative humidity, creating “red flag” conditions.<sup>32</sup> Diablo winds and low humidity are especially dangerous because low humidity can dry out trees and other fuel that may also be weakened by the winds. This can increase wildfire conditions in the EIR Study Area. Wind shifts can also occur suddenly due to temperature changes and interactions with steep slopes or hillsides, causing fires to spread unpredictably. Fall has historically been one of the most dangerous times for wildfire risk, as periods of very high temperatures, low humidity, and strong wind increases, causing “red flag” warnings and extreme fire danger.

### Fuel

The qualities of vegetation that directly influence fire risk include fuel type and size, loading, arrangement, chemical composition, and dead and live fuel moisture, which contributes to the flammability characteristics of the vegetation. As described in Chapter 4.3, *Biological Resources*, of this Draft EIR, the majority of San Mateo is developed with urban uses. Non-urban land cover within the city includes hardwood forest/woodland and herbaceous land cover, which occur along the western edge of EIR Study Area and the southwestern portion of San Mateo. Grasslands and woodlands are highly flammable, particularly leaf litter that is left to accumulate, ultimately dries, and provides fuel for potential fires. The fire risk in grassland and woodland vegetation communities can be reduced through several tactics, primarily controlled burns and annual grazing.<sup>33</sup>

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<sup>29</sup> Weatherspark, “Climate and Average Weather Year Round in San Mateo,” <https://weatherspark.com/y/560/Average-Weather-in-San-Mateo-California-United-States-Year-Round>, access July 10, 2023.

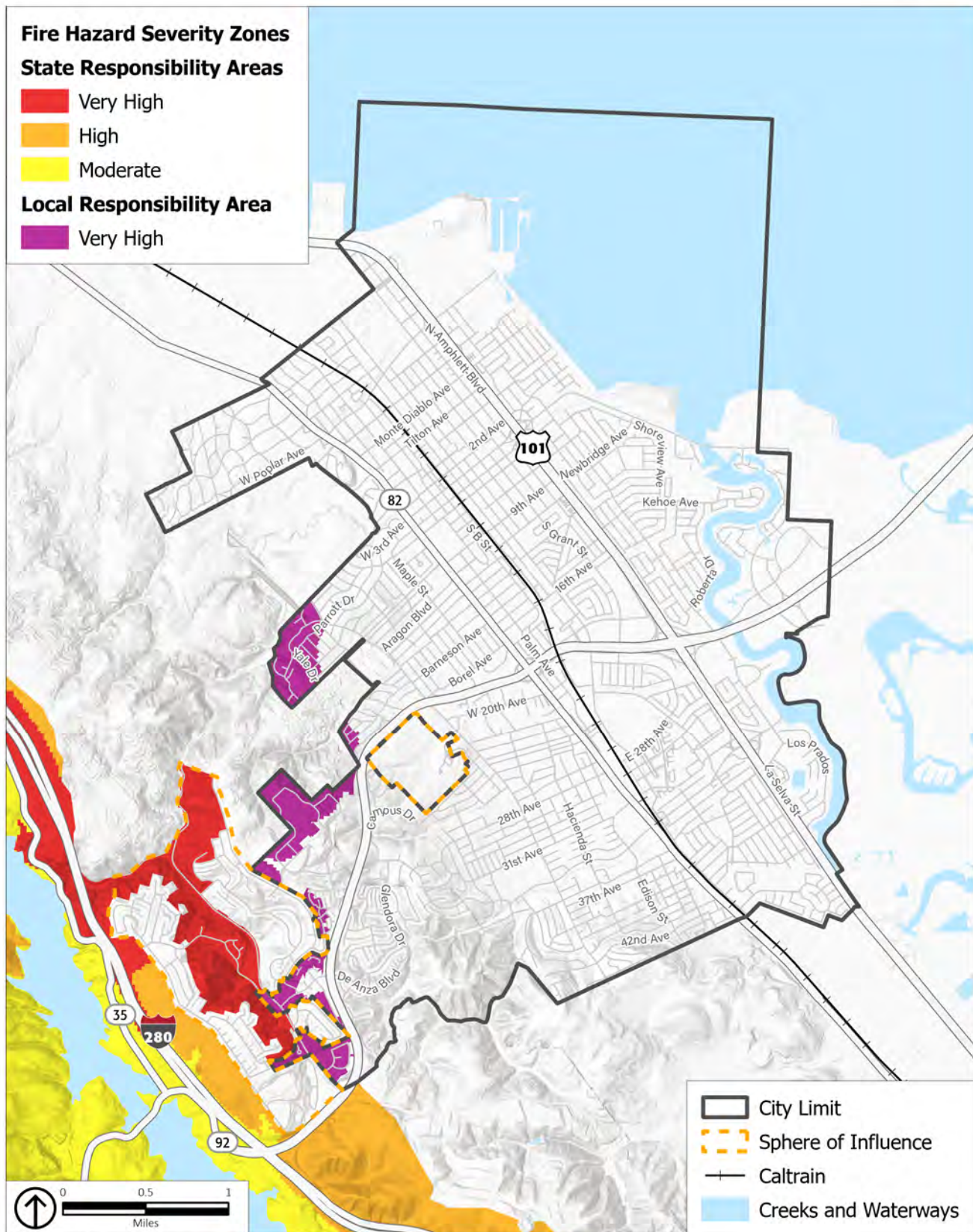
<sup>30</sup> Weatherspark, “Climate and Average Weather Year Round in San Mateo,” <https://weatherspark.com/y/560/Average-Weather-in-San-Mateo-California-United-States-Year-Round>, access July 10, 2023.

<sup>31</sup> Liu, YC., Di, P., Chen, SH. et al., November 28, 2020, *Climatology of diablo winds in Northern California and their relationships with large-scale climate variabilities*, <https://doi.org/10.1007/s00382-020-05535-5>, accessed December 16, 2022.

<sup>32</sup> The National Weather Service issues “red flag” weather day warnings when certain weather elements such as low relative humidity and strong winds could lead to increased wildfire risk.

<sup>33</sup> The Nature Conservancy, Restoring Fire to Native Grasslands, <https://www.nature.org/en-us/about-us/where-we-work/united-states/minnesota/stories-in-minnesota/restoring-fire-to-native-grasslands/>, accessed April 12, 2023.

**WILDFIRE**

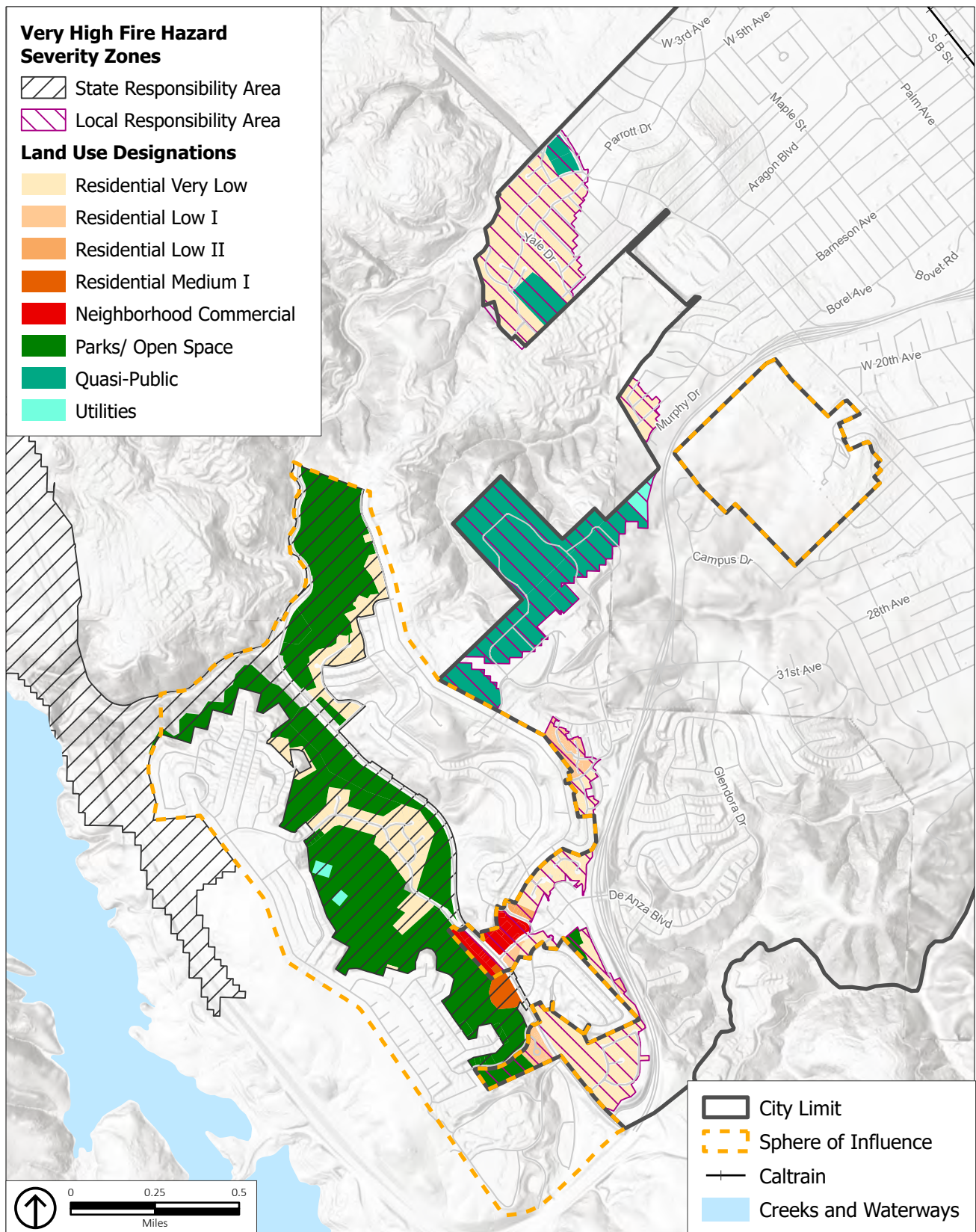


Source: CAL FIRE, 2022; PlaceWorks, 2023.

Figure 4.18-1  
**Fire Hazard Severity Zones**



## WILDFIRE



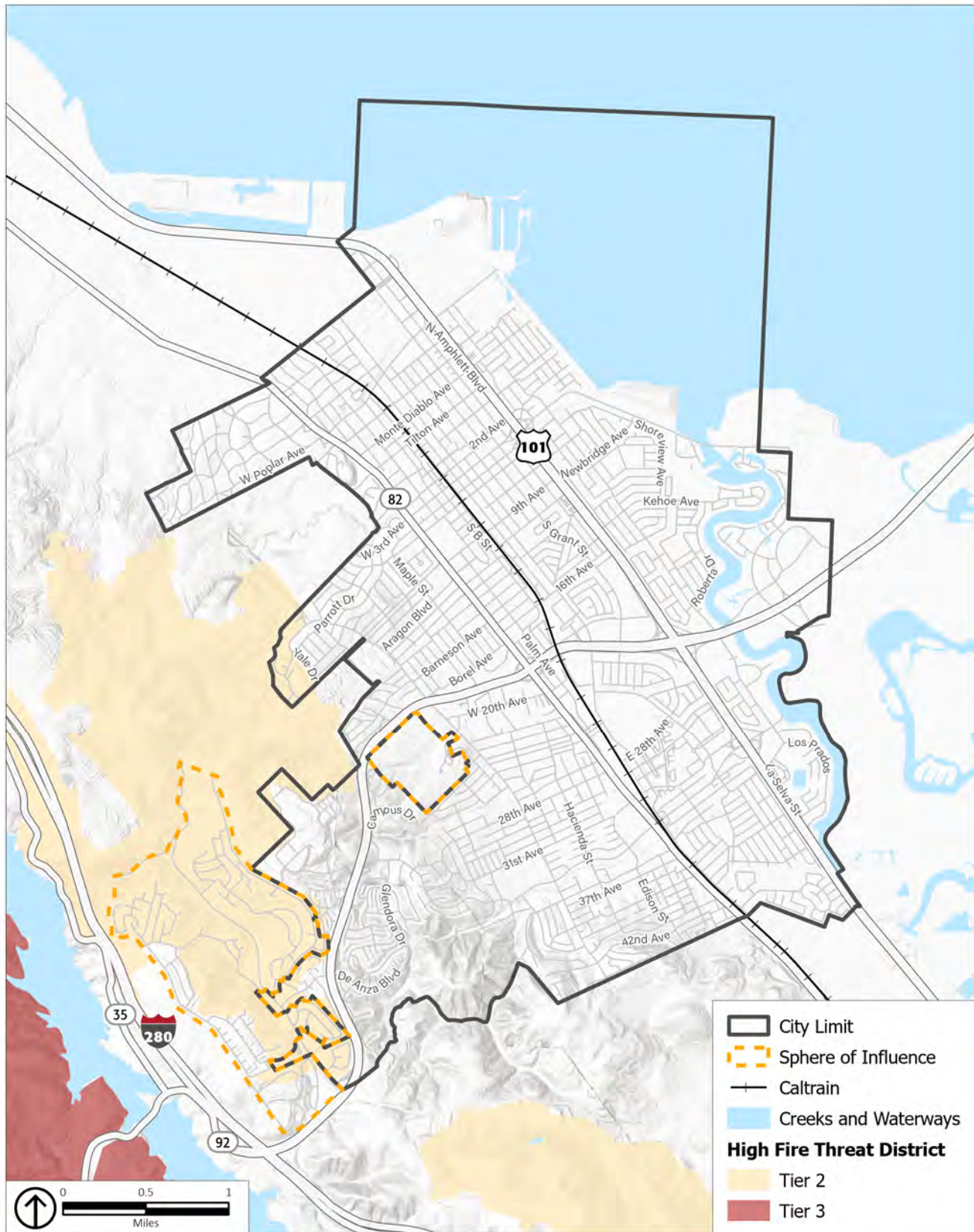
Source: CAL FIRE, 2022; City of San Mateo, 2022; PlaceWorks, 2023.

Figure 4.18-2

### Proposed Land Use Designations in Very High Fire Hazard Severity Zones



## WILDFIRE

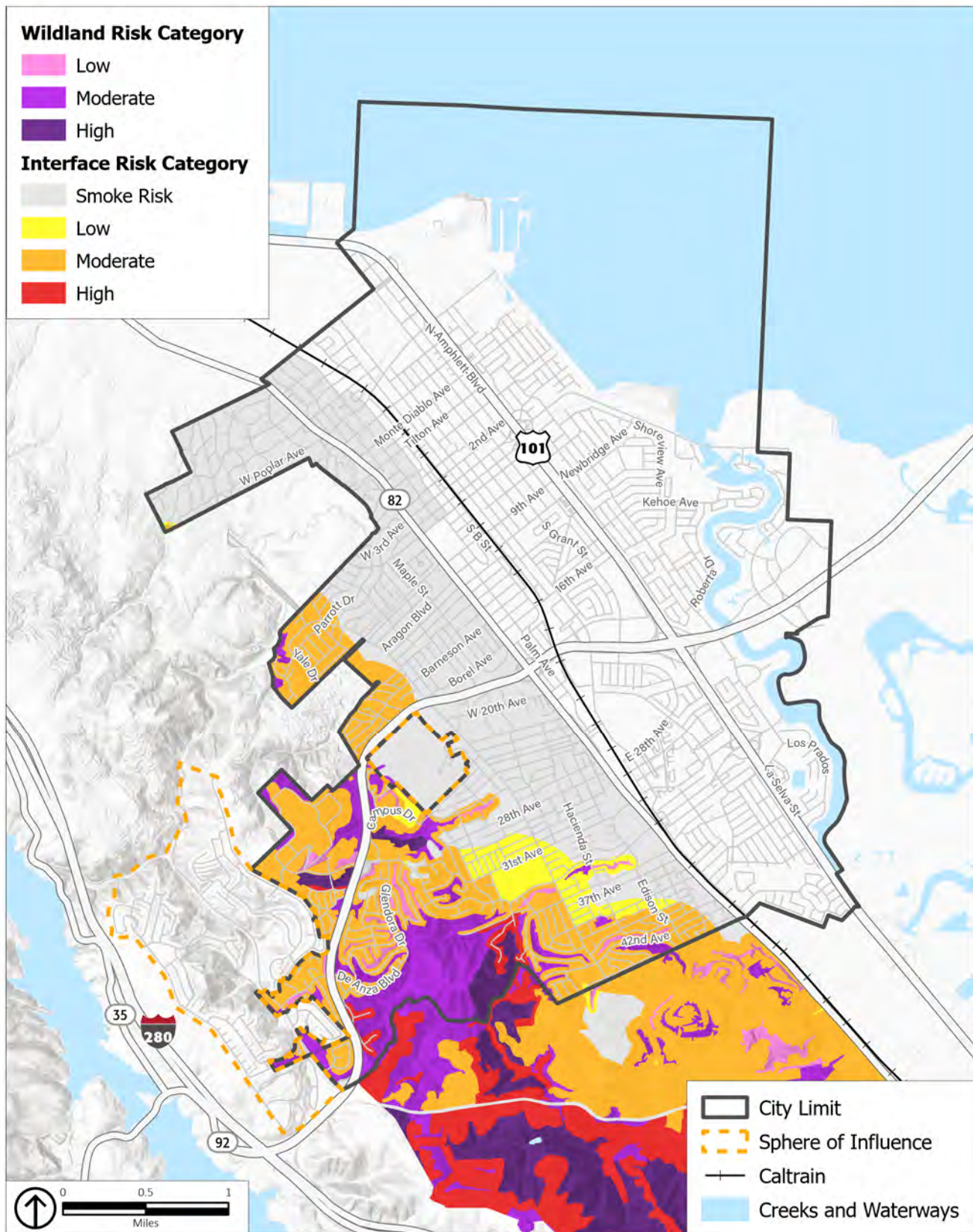


Source: CPUC, 2022; PlaceWorks, 2023.

Figure 4.18-3  
CPUC High Fire Threat District



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Source: City of San Mateo, 2022; PlaceWorks, 2023.

Figure 4.18-4  
Wildland Urban Interface

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### Topography

Slope is a measure of land steepness, and wildfire intensity and rate of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. For example, as slope increases from 20 to 40 percent, flame heights can double and rates of fire spread can increase fourfold; from 40 to 60 percent, flame heights can become three times higher, and rates of spread can increase eightfold. The arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes. As mentioned in Chapter 4.6, *Geology and Soils*, of this Draft EIR, the topography of the EIR Study Area ranges from flat near the San Francisco Bay to steeply sloped inland on the western edge of the EIR Study Area. The steeply sloped area largely coincides with the fire prone areas in the City Limits.

### Climate Change

Climate change is likely to increase annual average temperatures in the City of San Mateo from a historical 67.3 degrees Fahrenheit (°F), to 71.3 °F by 2050 and 74.5°F by 2100.<sup>34</sup> This will likely create warmer temperatures earlier and later in the year. Precipitation levels are projected to vary over the course of the century, changing from a historical annual average of 19.9 inches per year, to an annual average of 22.3 inches by 2050 and an annual average of 24.5 inches by 2099.<sup>35</sup> Variations in precipitation patterns will also lead to an increase in frequency and intensity of heavy precipitation events, as well as prolonged periods of drought. The combination of extreme heat and droughts can cause soils and vegetation to dry out, creating more fuel for wildfires. These factors are expected to increase wildfire conditions, creating a risk of more frequent and intense wildfires. Because wildfires burn the trees and other vegetation that help stabilize a hillside and absorb water, more areas burned by fire may also lead to an increase in landslides and floods. Historically, an average of 8.3 acres have burned annually in the EIR Study Area.<sup>36</sup> Wildfires are projected to increase to an annual average in the EIR Study Area of 19.7 acres burned by 2050 and an annual average of 21.6 acres burned by 2100.<sup>37</sup>

### Human Actions

Most wildfires are ignited by human action, the result of direct acts of arson, carelessness, or accidents. Many fires originate in populated areas along roads and around homes and are often the result of the careless disposal of cigarettes, mowing of dead grass, electricity equipment malfunction, use of equipment, or burning of debris. Recreation areas with increased human activity that are in fire-prone areas also increase the potential for wildfires.

## Fire Protection Resources

SMC Fire officially commenced operations on January 13, 2019. The department was formed by the establishment of a Joint Powers Authority and represents the merger of fire departments in the cities of

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<sup>34</sup> Cal-Adapt, 2023, Annual Averages, <https://cal-adapt.org/tools/annual-averages/>, accessed April 12, 2023.

<sup>35</sup> Cal-Adapt, 2023, Annual Averages, <https://cal-adapt.org/tools/annual-averages/>, accessed April 12, 2023.

<sup>36</sup> Cal-Adapt. 2023, Wildfire, <https://cal-adapt.org/tools/wildfire>, accessed April 12, 2023.

<sup>37</sup> Cal-Adapt. 2023, Wildfire, <https://cal-adapt.org/tools/wildfire>, accessed April 12, 2023.

Belmont, Foster City, and San Mateo.<sup>38</sup> Six of nine SMC Fire stations are located within the EIR Study Area: Station 21, Station 23, Station 24, Station 25, Station 26, and Station 27. Each fire station has one fire engine staffed by one Fire Captain and two Firefighters/Engineers. SMC Fire also staffs two 100-foot, tractor-drawn aerial ladder trucks, one out of Station 21 and the other out of Station 23, that respond to all major incidents in the community.<sup>39</sup> In 2021, SMC Fire's average response time was a little over 5 minutes and a majority of incidents were for rescues and emergency medical services.<sup>40</sup>

## Emergency Response Planning

The SMC Fire Office of Emergency Services and the San Mateo Police Department are responsible for coordinating emergency services in the city. SMC Fire manages and maintains emergency plans and training of City staff and community members. The Fire Chief and City Managers are responsible for the operation of the City's Emergency Operations Center, and coordinate planning, training, and preparation for response to major emergencies and natural disasters.<sup>41</sup> When evacuations are necessary, SMC Fire decides when and where an evacuation will be made, and the San Mateo Police Department helps carry out the evacuation event.<sup>42</sup>

San Mateo uses the San Mateo County Alert Notification System (SMC Alert), and other notification systems, to reach the community and distribute emergency information and instructions before, during, and after a disaster. Notifications are provided through telephone calls, text messages, email notifications, and various social media platforms. Other emergency alert systems include the national Emergency Alert Systems (EAS), the California Governor's Office of Emergency Services (CalOES)-operated Emergency Digital Information System (EDIS). These systems are available in multiple languages.

San Mateo County is in Region II of the California Fire Service and Rescue Emergency Mutual Aid System, which extends one to two counties inland from the Pacific Coast and from Monterey County to the Oregon border.<sup>43</sup> In the event of a wildfire requiring firefighting resources from outside of San Mateo County, mutual aid is typically first lent from other fire agencies in the affected region.

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<sup>38</sup> San Mateo Consolidated Fire Department, 2022, History, <https://www.smcfire.org/about-us/history/>, accessed August 2, 2022.

<sup>39</sup> San Mateo Consolidated Fire Department, 2022, Stations & Apparatus, <https://www.smcfire.org/about-us/station-locations/>, accessed August 2, 2022.

<sup>40</sup> San Mateo Consolidated Fire Department, 2021, *Annual Report: 2021 Edition*, <https://www.smcfire.org/wp-content/uploads/2022/03/Annual-Report-2021.pdf>, accessed August 2, 2022.

<sup>41</sup> San Mateo Consolidated Fire Department, 2022, Office of Emergency Services, <https://www.smcfire.org/divisions/community-risk-reduction/office-of-emergency-services/>, accessed August 8, 2022.

<sup>42</sup> J. Yoke (SMC Fire Emergency Services Manager), communications to PlaceWorks, SMC Fire Office of Emergency Services, May 25, 2023.

<sup>43</sup> San Mateo County Sheriff's Office, Homeland Security Division, Office of Emergency Services, May 2015, *County of San Mateo Emergency Operations Plan*, <https://hsd.smcsheriff.com/sites/default/files/downloadables/1%20-%20Emergency%20Operations%20Plan.pdf>, accessed August 2, 2022.

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### Evacuation and Access

Evacuation routes are designated roadways that allow many people to quickly leave an area due to a potential or imminent disaster. These routes should have sufficient capacity to accommodate the needs of the community, be safely and easily accessible, and allow people to travel far enough away to be safe from emergency conditions.

As shown in Figure 4.18-5, *Potential Evacuation Routes*, primary evacuation routes roads and highways that traverse the city include Highway 101, SR-82 (El Camino Real), SR-92, Alameda de las Pulgas, and Hillsdale Boulevard.

Several residential neighborhoods throughout the EIR Study Area have evacuation constraints, meaning only one road in and out of a neighborhood. Figure 4.18-6, *Evacuation-Constrained Areas*,<sup>44</sup> shows identified evacuation-constrained residential areas throughout the city, including sites within wildfire hazard zones in the western portion of the city, pursuant to California Government Code Section 65302(g)(5).

### 4.18.2 STANDARDS OF SIGNIFICANCE

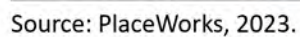
The proposed project would result in a significant wildfire impact if it would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan.
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.
5. In combination with past, present, and reasonably foreseeable projects, result in cumulative wildfire impacts in the area.

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<sup>44</sup> Evacuation-constrained areas mean residential parcels that have less than two access routes or residential parcels that are more than 0.5 miles away from the nearest evacuation route. This map was created pursuant to SB 99 and California Government Code Section 65302(g)(5).

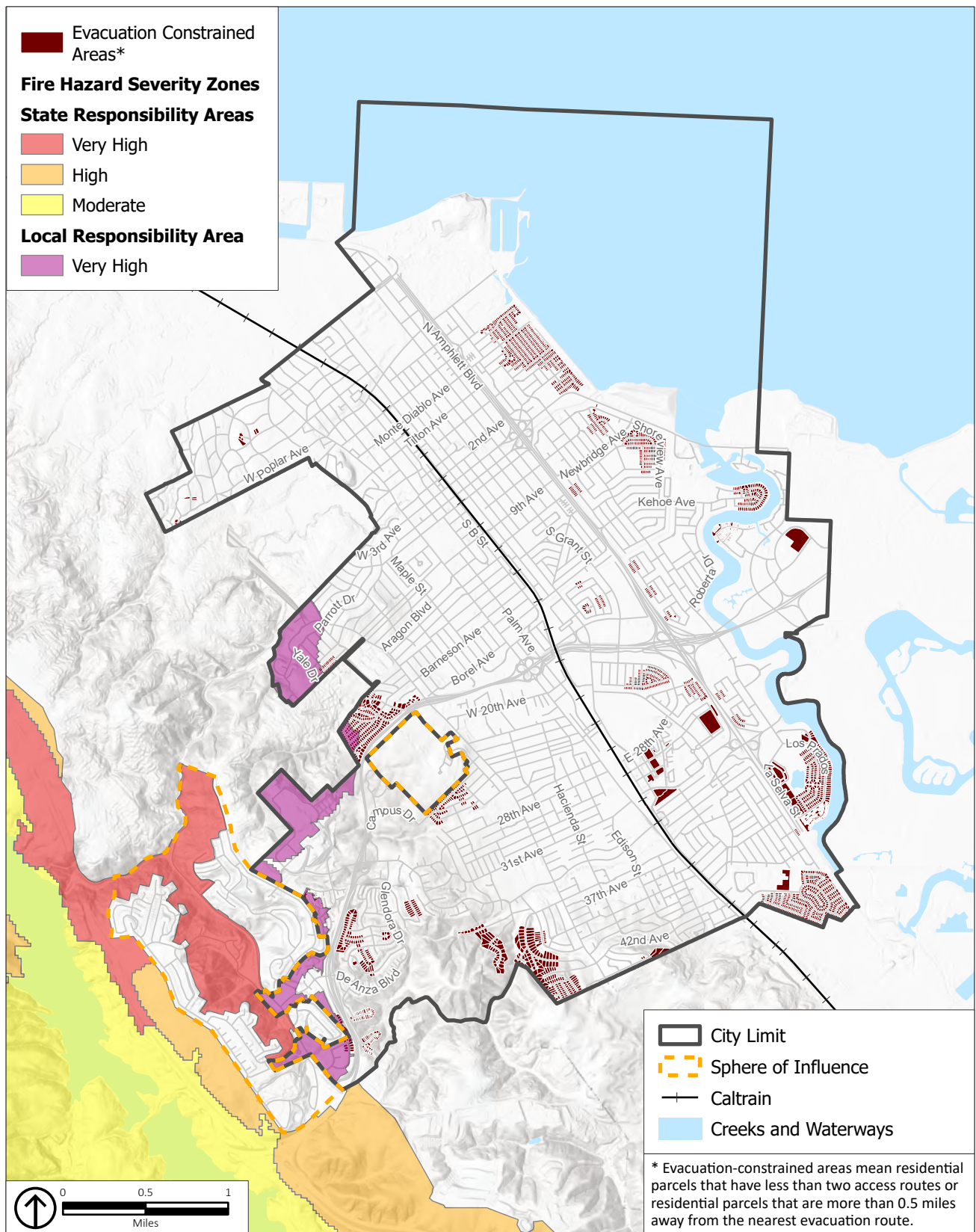




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Source: PlaceWorks, 2023.

Figure 4.18-6  
Evacuation-Constrained Areas

## 4.18.4 IMPACT DISCUSSION

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**WILD-1                      The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.**

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Adopted emergency response plans and emergency evacuation plans include those discussed under Section 4.18.1.1, *Regulatory Framework*, such as San Mateo County MJHMP. The proposed project could result in a significant impact if it would substantially impair the implementation of this plan. As discussed in Chapter 3, *Project Description*, of this Draft EIR, development under the proposed project would be focused within ten General Plan Land Use Study Areas. However, development may still occur on lands in the WUI or VHFHSZ in the western portion of the EIR Study Area.

Buildout under the proposed project would be located on properties that are already served by the existing roadway network and would not result in substantial changes to the circulation patterns or emergency access routes in the EIR Study Area. Additionally, future development under the proposed project would be required to integrate applicable emergency operation and evacuation requirements as necessary into development to continue its facilitation in evacuation for the people in wildfire-prone areas. Future development, regardless of whether it includes new development or redevelopment, is required to comply with adopted local, regional, and State plans and regulations addressing emergency access, response, and evacuation. Future development in the WUI or VHFHSZ would be required to comply with the VHFHSZ Fire Safe Regulations, the CBC, the CFC, and the SMMC, which have maximum requirements for lengths of single-access roads, minimum widths of roadways, and vegetation fuel management around roadways.

A temporary impact to emergency response and evacuation under the proposed project could occur from construction of future development projects if they were to result in temporary lane closures that would potentially alter evacuation routes. Potential future development in the EIR Study Area would be required to comply with applicable VHFHSZ Fire Safe Regulations, the CBC, the CFC, and the SMMC. These would be limited to the duration of the construction period, and direct impacts of construction would be evaluated during the permit review process by SMC Fire, and/or CAL FIRE. Review and approval of temporary lane closures, if needed, for future development projects in the EIR Study Area would ensure that that no inconsistencies with emergency evacuation plans would occur.

The Safety (S) Element of the proposed General Plan provides guidance to help protect the community and mitigate potential impacts from natural and human-caused hazards. The following General Plan 2040 goal, policies, and actions would serve to minimize potential adverse impacts related to emergency response and evacuation:

- **Goal S-1:** Minimize potential damage to life, environment, and property through timely, well-prepared, and well-coordinated emergency preparedness, response plans, and programs.
  - **Policy S 1.1: Emergency Readiness.** Maintain the City's emergency readiness and response capabilities, especially regarding hazardous materials spills, natural gas pipeline ruptures, fire hazards, wildland fire risk, earthquakes, pandemics, and flooding. Focus primarily on areas identified by the city as underserved and most vulnerable to loss of life and property due to

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proximity to hazardous incidences, and work to ensure funding is available to these communities as a key component of emergency readiness.

- **Policy S 1.4: Multiple Egress Points.** Require new development to provide at least two points of emergency access (ingress and egress).
- **Policy S 1.5: Emergency Planning Document Coordination.** Pursue integration of the City's existing safety and emergency management documents with one another, including this Safety Element, the Local Hazard Mitigation Plan, and other related documents.
- **Policy S 1.8: Response Times.** When reviewing and analyzing roadway improvements, consider how emergency response times can be maintained and improved without reducing roadway user safety.
- **Policy S 1.10: Disaster Recovery.** Ensure that the City government continues to operate during and after hazard events and is able to provide resources and guidance to people and institutions in San Mateo for recovery and reconstruction following the end of the hazard event.
- **Policy S 1.11: Evacuation Education.** Include information about safe and effective evacuation as part of natural disaster awareness, prevention, and community education and training efforts. Share information about how to prepare for evacuations, potential evacuation routes and shelter locations, how to receive notifications, and other relevant topics.
- **Policy S 1.12: Inclusive Outreach.** Notify the community of potential hazards affecting their neighborhood. Use outreach and engagement methods that encourage broad representation and are culturally sensitive, particularly for equity priority communities.
- **Policy S 1.13: Emergency Training.** Conduct training for all City employees to ensure basic understanding of Disaster Service Worker responsibilities, the State Emergency Management System, National Incident Management System, and the Incident Command System.
- **Policy S 1.14: Multijurisdictional Cooperation.** Continue the development of local preparedness plans and multijurisdictional cooperation and communication for emergency situations.
- **Policy S 1.15: Emergency Preparedness.** Coordinate with San Mateo County, neighboring cities, and non-governmental partners to effectively prepare for and respond to hazards and natural disasters.
- **Action S 1.16: Evacuation Routes.** Maintain adequate evacuation routes as identified by arterial streets shown in the Circulation Element, Figure C-3 [of the proposed General Plan]. Evaluate each evacuation route's feasibility using a range of hazard criteria. Update this map on a regular basis to reflect changing conditions and State requirements for evacuation routes.
- **Action S 1.18: Automatic and Mutual-Aid Agreements.** Participate in mutual aid agreements with other local jurisdictions to provide coordinated regional responses, as necessary, to fire, flood, earthquake, critical incidents and other hazard events in San Mateo and the surrounding area. Work with local jurisdictions to share resources and develop regional plans to implement disaster mitigation and resilience strategies such as government continuity, emergency operations centers, communications redundancies.

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- **Action S 1.20: Rebuilding Priorities.** Establish rebuilding priorities and procedures in the event of a major disaster to expedite reconstruction and enhance access to funding opportunities with special emphasis on equity priority communities that are more vulnerable to climate hazards.
- **Action S 1.22: Public Safety Outreach.** Develop a public safety education program to increase public awareness of potential hazards, City's emergency readiness and response program, and evacuation routes. Target public education programs to segments of the community that are most vulnerable to hazards and safety risks.
- **Action S 1.23: Community Training.** Collaborate with SMC Fire to provide emergency preparedness trainings to maintain and expand existing Community Emergency Response Teams (CERTs).
- **Action S 1.24: Emergency Infrastructure and Equipment.** Establish systems in place to ensure that traffic lights at major intersections, communications and radio infrastructure, and other critical infrastructure continues to function in the event of a localized power outage. Repair any damaged sets of infrastructure or equipment as needed to continue City operations.
- **Action S 1.26: Response Time Study.** Conduct a Response Time Study to provide a data-driven understanding of how future roadway safety improvements could impact emergency response times and use this information to adjust proposed roadway improvements as needed.
- **Action S 1.27: Emergency Notification System.** Develop an emergency notification system (e.g. SMC Alert and Nixle) for flood-prone neighborhoods and businesses before, during, and after a climate hazard event and assist in their evacuation and other support activities. This includes coordination with the San Mateo County Flood and Sea Level Rise Resiliency District (OneShoreline) on its early flood warning notification system.
- **Goal S-5: Maintain adequate fire and life safety protection from wildland fires.**
  - **Policy S 5.12: Secondary Access.** Explore secondary means of ingress and egress in areas with evacuation constraints, as shown in Figure S-2 [of the proposed General Plan], Evacuation-Constrained Areas, for existing subdivisions or developments of 30 units or more within a Very High Fire Hazard Severity Zone.
  - **Policy S 5.13: Emergency Access.** Require that roads, driveways, and other clearances around structures are located and designed to ensure emergency access.
  - **Policy S 5.14 Emergency Services.** Work with SMC Fire to provide fire prevention, protection, and emergency preparedness services that adequately protect residents, employees, visitors, and structures from fire and fire-related emergencies.

Implementation of these policies would increase the effectiveness of emergency operations and evacuation, and therefore would not impair or conflict with the applicable plans. The proposed General Plan goal, policies, and actions listed above would increase the effectiveness of the emergency operations and evacuation, and therefore the proposed project would not impair or conflict with the applicable plans and impacts related to emergency response and evacuation would be *less than significant*.

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**Significance without Mitigation:** Less than significant.

<b>WILD-2</b>	<b>The proposed project would, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.</b>
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As discussed in Section 4.18.1.2, *Existing Conditions*, San Mateo is subject to strong northerly and northeasterly winds, also known as Diablo winds, in early fall through early spring. These winds have high speeds and can shift suddenly, and they are often accompanied by low humidity. They create dangerous conditions for starting and spreading wildfires during the drier months of the year, and they also spread wildfire smoke hazards, as can prevailing winds. Future development under the proposed project could exacerbate wildfire risks by adding people to wildfire-prone areas in the EIR Study Area and exposing people in the city and surrounding jurisdictions to pollutant concentrations from a wildfire. A wildfire combined with Diablo winds could expose residents in the area to the uncontrolled spread of wildfire.

As discussed in Section 4.18.1.2, *Existing Conditions*, the topography in wildfire-prone areas of San Mateo is steeply sloped. Construction of future development projects and activities under the proposed project in these areas may require grading and site preparation activities that could change the slope of a single parcel or site. Though most of the development would occur in the ten General Plan Land Use Study Areas, which are outside of wildfire prone areas, development and redevelopment in San Mateo could occur where topography is steeper.

Section 4.18.1.1, *Regulatory Framework*, describes plans, policies, regulations, and procedures that help to reduce wildfire risks. The 2018 Strategic Fire Plan for California, 2021 California Wildfire and Forest Resilience Action Plan, San Mateo County MJHMP, Santa Cruz San Mateo County Community Wildfire Protection Plan, and San Mateo – Santa Cruz Unit Strategic Plan are intended to reduce wildfire hazards and coordinate response to these hazards on a statewide and regional scale. In addition, the Bay Area Air Quality Management District provides air quality alerts, advisories, and an interactive online map to view current air quality conditions in the region.

All potential future development in San Mateo would be required to comply with the CBC, CFC, VHFHSZ Fire Safe Regulations, San Mateo Municipal Slope and Hillside Development Standards, and grading requirements, which include standards to minimize the ignition and spread of wildfire due to slopes.

The Safety (S) Element of the proposed General Plan provides guidance to help protect the community and mitigate potential impacts from natural and human-caused hazards. In addition to the proposed goal, policies, and actions identified in impact discussion WILD-1, the following General Plan 2040 goals, policies, and actions would minimize wildfire risks:

- **Goal S-1:** Minimize potential damage to life, environment, and property through timely, well-prepared, and well-coordinated emergency preparedness, response plans, and programs.

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- **Policy S 1.2: Local Hazard Mitigation Plan.** Incorporate by reference the San Mateo County Multi-Jurisdictional Local Hazard Mitigation Plan, approved by the Federal Emergency Management Agency (FEMA) in 2021, along with any future updates or amendments, into this Safety Element in accordance with Government Code section 65302.6.
- **Goal S-2:** Take steps to protect the community from unreasonable risk to life and property caused by seismic and geologic hazards.
  - **Policy S 2.1: Geologic Hazards.** Require site-specific geotechnical and engineering studies, subject to the review and approval of the delegated City Engineer and Building Official, for development proposed on sites identified in Figure S-4 [of the proposed General Plan] as having moderate or high potential for ground failure. Permit development in areas of potential geologic hazards only where it can be demonstrated that the project will not be endangered by, nor contribute to, the hazardous condition on the site or on adjacent properties.
  - **Policy S 2.2: Landslides and Erosion Control.** Reduce landslides and erosion in existing and new development through continuing education of design professionals on mitigation strategies. Control measures shall retain natural topographic and physical features of the site, if feasible.
- **Goal S-5:** Maintain adequate fire and life safety protection from wildland fires.
  - **Policy 5.1: Very High Fire Hazard Severity Zones.** Avoid new residential development in Very High Fire Hazard Severity Zones, as shown on Figure S-14 [of the proposed General Plan], or the most current data available from CAL FIRE. Redevelopment or reconstruction of existing structures is allowed. Coordinate with San Mateo Consolidated Fire Department (SMC Fire) to ensure new construction of buildings or infrastructure within a Fire Hazard Severity Zone or Wildland-Urban Interface (WUI), as shown on Figures S-12 [of the proposed General Plan] and S-13 [of the proposed General Plan] or the most current data available from CAL FIRE, are in full compliance with applicable State and local regulations and meet the Very High Fire Hazard Severity Zone Fire Safe Regulations for road ingress and egress, fire equipment access, and adequate water supply.
  - **Policy S 5.2: Reconstruction of Development.** Require reconstruction projects or significant retrofits in a Fire Hazard Severity Zone and the Wildland-Urban Interface, as shown on Figures S-12 [of the proposed General Plan] and S-13 [of the proposed General Plan] or the most current data available from CAL FIRE, to be consistent with the California Building Standards Code, California Fire Code, and Very High Fire Hazard Severity Zone Fire Safe Regulations.
  - **Policy S 5.3: Wildland Fire Protection.** Require all development in and adjacent to designated Fire Hazard Severity Zone and Wildland-Urban Interface to prepare a fire protection plan for review and approval by SMC Fire prior to issuance of building permits and to provide access and defensible space in accordance with California codes and local ordinances.
  - **Policy S 5.9: Land Use Management for Fire Risks.** Maintain all City-owned public lands and work with private landowners to reduce fuel loads, establish appropriately placed fire breaks/defensible space, require long-term maintenance of fire hazard reduction projects, and educate all property owners in the city on proper landscape maintenance and firescaping standards to reduce the risk of fire hazards.



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- **Policy S 5.11: Fire Safe Roads.** Coordinate with SMC Fire to evaluate new development or significant retrofits that have access on roadways that do not meet fire safe road and vegetation standards within the Wildfire-Urban Interface and/or Very High Fire Hazard Severity Zone and ensure that road standards and vegetation management occurs and is maintained.
- **Action S 5.15: Tree Maintenance.** Collaborate with SMC Fire to maintain City-owned trees in a manner that does not contribute to fire danger, in accordance with current Best Management Practices (BMPs).
- **Action S 5.16: Fire-Safe Education.** Work with SMC Fire and seek funding to develop a fire-safe education program that provides information and awareness to community members about defensive space, fire-resistant landscaping and construction, evacuation preparation, and other wildfire education topics.
- **Action S 5.18: Vegetation Management on City-Owned Land.** Coordinate with SMC Fire to continue conducting and providing long-term maintenance of vegetation management projects in City-owned parks and open spaces to prevent wildfire ignition and spread.
- **Action S 5.19: Reevaluation of Development Standards.** Reevaluate development standards for wildfire risk areas following major wildfire events and apply updated standards as needed to maintain high levels of wildfire protection.
- **Action S 5.20: Vegetation Management.** Coordinate with the SMC Fire and the FIRE SAFE San Mateo County to obtain funding for and conduct vegetation and fuel modification or management.

Proposed General Plan Policies S 2.1 and S 2.2 requires new development to have a site-specific geotechnical and engineering study conducted in areas of moderate or high potential for ground failure, as well as reducing landslides and erosion in existing and new development through ensuring implementation of geologic hazard mitigation measures. However, wildfire smoke could potentially travel up a slope during a wildfire. Therefore, even with existing regulatory requirements and proposed General Plan goals, policies, and actions, potential future development under the proposed project could expose people to the uncontrolled spread of wildfire or pollutant concentrations due to slope conditions within certain areas of the EIR Study Area.

Other factors, such as vegetation, have the potential to exacerbate wildfire risks. The grassland and woodland areas of western San Mateo are easily ignited, especially during late summer and fall when temperatures and winds are high and relative humidity is low. During these conditions, woodland vegetation can dry out, particularly in areas with unirrigated vegetation, becoming extremely flammable and increasing wildfire risks.

As described in Section 4.18.1.1, *Regulatory Framework*, the San Mateo County MJHMP and Santa Cruz San Mateo County Community Wildfire Protection Plan contain several vegetation management, fuel reduction, and fuel break projects to reduce the uncontrolled spread of wildfire due to vegetation. Additionally, as stated above, all potential future development in wildfire-prone areas in San Mateo would be required to comply with VHFHSZ Fire Safe Regulations, Public Resources Code Section 4291, the CFC, and the SMMC. These regulations have specific requirements for new and existing development

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to create defensible space and extensive fuel reduction within 100 feet of a structure, an ember-resistant zone within 5 feet of a structure, and the overall maintenance of properties to reduce the risk of uncontrolled fires or the spread of fires to other properties.

The proposed General Plan goals, policies, and actions listed above would serve to reduce wildfire risks associated with vegetation. These policies would ensure that fire hazard reduction measures occur and are maintained, and that existing and new development in woodland and grassland areas would incorporate vegetation management measures. However, even with existing regulatory requirement and proposed Safety Element policies, potential future development under the proposed project could expose people to the uncontrolled spread of wildfire or pollutant concentrations due to factors such as vegetation.

Implementation of the proposed project could increase population, buildings, and infrastructure in wildfire prone areas. The introduction of additional humans (through new development and redevelopment) and human activities (including the use of construction equipment) to fire-prone areas inherently exacerbates existing fire hazards. Though proposed General Plan goals, policies, and actions and mandatory State wildfire hazard reduction measures reduce risks in wildfire-prone areas, impacts related to exacerbating the risk of pollutant concentrations from wildfire and the uncontrolled spread of wildfire would be reduced, but not to a less-than-significant level. The proposed General Plan contains policies that require existing development, new, and redevelopment projects to create and maintain fire safe vegetation around structures and roadways and enforcement of VHFHSZ Fire Safe Regulations. New development would also be required to prepare Fire Protection Plans. These policies provide the best wildfire hazard reduction measures available. Adherence to the above building practices, fire safety regulations, and vegetation fuel management requirements would reduce the potential for exacerbating wildfire risks. However, due to the programmatic nature of this analysis, the unknown details and potential impacts of specific future potential development projects under the proposed project, and the potential for future development to be in wildfire-prone areas, impacts are considered to be *significant*.

**Impact WILD-2:** Development under the proposed project would increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

**Mitigation Measure:** None available.

**Significance with Mitigation:** Significant and unavoidable. Policies identified in the proposed General Plan provide the best wildfire hazard reduction measures available. However, the only way to fully avoid the wildfire impact from implementation is to prohibit development in areas in VHFHSZs and the WUI. The majority of western San Mateo is in a VHFHSZ and/or the WUI. Prohibiting new development in this portion of San Mateo is not feasible or practical because the City has a responsibility to meet other, conflicting obligations, including increasing the number and type of housing available and allowing reconstruction of homes burned by wildfires. Therefore, this measure is considered and rejected and there are no feasible mitigation measures beyond the policies and plans described above. Due to potential unknown impacts from future development under the proposed project, impacts at the programmatic level would remain significant and unavoidable. This conclusion does not preclude a finding of less-than-significant impacts at the project level.

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<b>WILD-3</b>	<b>The proposed project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.</b>
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Buildout and implementation of the proposed project could require the installation of new roadways, fuel breaks, emergency water sources, power lines, and other utilities to serve future potential development in the City of San Mateo.

- **Roadways.** The proposed project does not include new roadways in VHFHSZ. Potential future development under the proposed project could, however, create new or expanded roadways in the southwest, fire-prone areas of San Mateo, including converting unpaved roads to paved access roads, developing roadways to new development, and expanding existing roads to accommodate evacuation and multi-modal forms of transportation. State VHFHSZ Fire Safe Regulations would prevent structures from being placed within 30 feet of a roadway, reducing the potential for new roadways to exacerbate wildfire risks, reducing the potential for new roadways to exacerbate wildfire risks.
- **Fuel Breaks.** As discussed in impact discussion WILD-2, the Safety (S) Element of the proposed General Plan includes Policies S 5.1 and S 5.9 which require development in and adjacent to designated wildland fire areas to provide defensible space and the City to establish appropriately placed fire breaks and defensible space on City-owned public lands.
- **Emergency Water Sources.** The Safety (S) of the proposed General Plan includes the following goal and policies to minimize wildfire risks associated with emergency water resources:
  - **Goal S-5:** Maintain adequate fire and life safety protection from wildland fires.
    - **Policy S 5.7: Peakload Water Supply.** Ensure that the California Water Service Company and the Estero Municipal Improvement District provide and maintain a water supply and distribution system that provides an adequate static pressure to deliver the minimum fire hydrant flow to all areas of the city, except where a lesser flow is acceptable, as determined by SMC Fire.
- **Power Lines.** Potential future development under the proposed project could require electrical line installations and connections to provide power to buildings and infrastructure. The Public Services and Facilities (PSF) Element of the proposed General Plan includes the following goal, policies, and actions to minimize wildfire risks associated with power lines:
  - **Goal PSF-4:** Promote the development of a clean energy supply, energy-efficient technology, and telecommunications facilities that benefit all members of the community.
    - **Policy PSF 4.7: Service Improvement and Expansion.** Seek to ensure adequate energy and communication systems to serve existing and future needs while minimizing impacts on existing and future residents by requiring new development to underground power lines and provide underground connections, when feasible, and prioritizing cellular coverage for all areas of the city while appropriately minimizing visual impacts of cellular facilities, antennas, and equipment shelters.

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- **Action PSF 4.13: Utility Network Undergrounding.** Underground existing electrical and communication transmission and distribution lines in the public right-of-way as funds permit.
- **Action PSF 4.14: Utility Undergrounding Requirements.** Amend the San Mateo Municipal Code to require new private development to underground utilities and service connections on and adjacent to the site and to install and maintain signs, streetlights, and street landscaping adjacent to sidewalks.

Additionally, the CPUC requires maintenance of vegetation around power lines, strict wire-to-wire clearances, annual inspections of aboveground power lines, and the preparation of fire prevention plans for aboveground power lines in high fire-threat districts. These measures would reduce the wildfire risks associated with the installation and maintenance of power lines.

- **Other Utilities.** Potential future development under the proposed project could also require the installation and maintenance of water systems, sewer systems, internet infrastructure, and stormwater systems in wildfire-prone areas.

These types of improvements would involve temporary construction and result in changes to the existing built environment. Any development or redevelopment in the wildfire-prone areas of southwestern San Mateo would also be required to comply with building and design standards in the CBC and CFC, which include provisions for fire-resistant building materials, the clearance of debris, and fire safety requirements during demolition and construction activities. PRC Section 4291 also requires vegetation around buildings or structures to maintain defensible space within 100 feet of a structure and an ember-resistant zone within 5 feet of a structure. These measures, along with the other applicable State regulations and the proposed General Plan goals, policies, and actions discussed above, would minimize wildfire risks associated with the installation and maintenance of infrastructure. Therefore, impacts would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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<b>WILD-4</b>	<b>The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.</b>
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Wildfires, such as the 2020 CZU Lightning Complex Fire, can create favorable conditions for other hazards, such as flooding and landslides during the rainy season. Wildfires on hillsides can burn the vegetation that stabilizes the slope and create hydrophobic conditions that prevent the ground from absorbing water. This can lead to landslides, debris flows, and flooding. The proposed project would result in a significant impact if—due to slopes, drainage patterns, or postfire slope instability—it would expose people or structures to significant risks from landslides, debris flows, or flooding.

As discussed in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, parts of San Mateo are in the 100-year and 500-year floodplains. As shown in Figure 4.9-2, *Potential Flood Hazards*, and Figure 4.9-3, *2019 Revised Floodplain Map of San Mateo*, in Chapter 4.9, floodplains are primarily in the northern and

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eastern portions of the city along the San Francisco Bay and Seal Slough. As discussed in Chapter 4.6, *Geology and Soils*, of this Draft EIR, slopes in the southwestern part of the city are the areas with landslide susceptibility and coincide with VHFHSZs. These areas are considered susceptible to landslides from precipitation and other causes. This overlap could cause areas outside of a flood hazard or landslide-susceptible zone to be affected by runoff, post-fire slope instability, or drainages changes following a wildfire.

The Safety (S) Element of the proposed General Plan provides guidance to help protect the community and mitigate potential impacts from natural and human-caused hazard. In addition to the proposed goals, policies, and actions identified in impact discussion WILD-2, the following General Plan 2040 goals, policies, and actions would serve to minimize potential adverse impacts related to postfire slope instability or drainage changes upstream:

- **Goal LU-2:** Balance well-designed development and thoughtful preservation.
  - **Policy LU 2.1: Development Intensity/Density.** Regulate development density/intensity to recognize natural environmental constraints, such as flood plains, earthquake faults, debris flow areas and other hazards, availability of urban services and transportation and circulation constraints.
- **Goal CD-2:** Minimize the impact of hillside development on the natural environment and public safety.
  - **Policy CD 2.1: Hillside Development Principles.** Require hillside development to minimize impacts by preserving the existing topography, limiting grading or cuts and fills, clustering development, and identifying opportunities for restoration or re-wilding. Limit development on steep hillsides with a 30 percent or higher slope.
  - **Policy CD 2.2: Minimal Impacts.** Require new development to preserve natural topographic forms and to minimize adverse impacts on vegetation, water, soil stability, and wildlife resources.
- **Goal S-3:** Protect the community from unreasonable risk to life and property caused by flood hazards.
  - **Policy S 3.1: Development within Floodplains.** Protect new development and substantial retrofits within a floodplain by requiring the lowest finish floor elevation to be three feet above the applicable floodwater elevation or by incorporating other flood-proofing measures consistent with Federal Emergency Management Agency (FEMA) regulations, OneShoreline guidance, the City's Floodplain Management Ordinance and other City policy documents.
  - **Action S 3.3: Flood Risk Mapping Data.** Regularly update mapping data pertaining to the 100-year and 500-year floodplains, dams, and levee failure as information becomes available.
  - **Action S 3.4: Community Rating System.** Undertake efforts that increase the City's rating under FEMA's Community Rating System, such as expanding and improving Geographic Information System (GIS) mapping capacity, developing a flood early warning system, and creating a Flood Emergency Action Plan.

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- **Action S 3.5: Early Flood Warning.** Collaborate with OneShoreline to provide early flood warning for flood-prone areas of the city through OneShoreline’s stream monitoring station and notification system.
- **Goal S-5:** Maintain adequate fire and life safety protection from wildland fires.
  - **Policy S 5.4: Hillside Vegetation Stability.** Stabilize, and as feasible re-vegetate, burned slopes following a wildfire event to reduce landslide and debris flows risk.

Furthermore, all new development in the EIR Study Area is required to comply with State and local regulations, such as applicable requirements of the CBC and SMMC, both of which contain provisions to reduce flooding and landslides in existing and new development. For example, Section 1803 of the 2022 California Building Code requires a geotechnical investigation that must assess existing landslide susceptibility on a project site. As described in Section 4.18.1.1, *Regulatory Framework*, SMMC Section 27.83 and Section 23.33.010 provide regulations for existing and new development to reduce landslide and flooding potential downslope or downstream.

New development complying with the SMMC and the proposed General Plan goals, policies, and actions listed above would not expose people or structures to downslope landslides or downstream flooding due to postfire hazards. Furthermore, as identified in impact discussions WILD-1 and WILD-2, development under the proposed project must also comply with best management practices regarding wildfire prevention, action, and recovery as outlined in the San Mateo – Santa Cruz Unit Strategic Fire Plan, and Santa Cruz San Mateo County Community Wildfire Protection Plan. All future development, regardless of the location, is required to comply with adopted local, regional, and State plans and regulations addressing wildfire prevention, which would minimize risks of postfire hazards. Compliance with these policies and regulatory requirements would ensure that impacts from postfire instability would be *less than significant*.

**Significance without Mitigation:** Less than significant.

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WILD-5	The proposed project would, in combination with past, present, and reasonably foreseeable projects, result in cumulative wildfire impacts in the area.
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The cumulative setting includes potential future development in the City of San Mateo and the surrounding region. Future development under the proposed project would not substantially impair an adopted emergency response plan for emergency evacuation plan; would not exacerbate wildfire risks due to the installation or maintenance of infrastructure; and would not cause downslope or downstream post-fire flooding or landslide hazards. Cumulative development in adjacent jurisdictions would be subject to the same State regulations applicable to future projects under the proposed project. Although federal lands would not be subject to State regulations, they would still be subject to the National Cohesive Wildfire Management Strategy and the NFPA Standards.

However, the proposed project would result in significant and unavoidable impacts where it would potentially expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread



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of a wildfire due to slope, prevailing winds, or other factors, as described in impact discussion WILD-2. The addition of other proposed development projects in adjacent jurisdictions in similar environments that are sloped and contain high fuel loads would have the potential to contribute to cumulative wildfire risks. These projects would have the potential to result in significant environmental impacts and they could also potentially expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors. These would potentially result in cumulatively considerable impacts when taken into consideration with the proposed project. In general, the increase of potential development projects within the SRA in the Sphere of Influence and unincorporated County lands outside of the EIR Study Area, along with the VHFHSZ or WUI would result in a cumulatively significant impact, due to the inherent risk of any increased human activity in these areas. Therefore, cumulative wildfire impacts would be considered *significant*.

**Impact WILD-5:** Potential development under the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones, or Wildland Urban Interface, result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

**Mitigation Measure:** None available.

**Significance without Mitigation:** Significant and unavoidable. Similar to Impact HAZ-7, HAZ-8, and WILD-2, the only way to fully avoid the cumulative wildfire impact is to prohibit development in the SRA, VHFHSZs, and WUI throughout the region. As a full prohibition of development in these areas is not feasible in the region, this impact is significant and unavoidable.

## 5. Alternatives

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The following discussion is intended to inform the public and decision makers of feasible alternatives to the proposed project that would avoid or substantially lessen any of the significant effects of the proposed project. The California Environmental Quality Act (CEQA) Guidelines set forth the intent and extent of alternatives analysis to be provided in an environmental impact report (EIR). Section 15126.6(a) of the CEQA Guidelines states that:

*An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives, which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.*

### 5.1 INTRODUCTION

The alternatives evaluated in this Draft EIR were developed consistent with Section 15126.6(b) of the CEQA Guidelines, which states that:

*Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.*

Section 15126.6(c) of the CEQA Guidelines states:

*The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.*

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### 5.2 PROJECT OBJECTIVES

As stated above, the range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the proposed project. As listed in Chapter 3, *Project Description*, of this Draft EIR, the primary purposes of the proposed project are to plan for the growth and conservation of San Mateo over a 20-year time horizon and to:

- Identify the location and allowed density and intensity of San Mateo's land uses including housing, businesses, industry, open space, schools, civic buildings, etc.
- Plan for future circulation and infrastructure improvements.
- Identify sufficient residential land to meet the current and future housing needs for people at all income levels.
- Protect natural resources, such as water, air, trees, and hillsides, and preserve and improve open spaces, including open space for recreation, for habitat, or for public health and safety.
- Protect residents from harmful or disruptive levels of noise.
- Keep the community safe from natural and human-caused hazards, such as earthquakes, landslides, floods, and wildfires, including increased risks from climate change.
- Improve the safety and quality of life for residents of neighborhoods that face a combination of both higher-than-average pollution exposure and social and economic challenges such as low incomes, language barriers, or housing instability (Equity Priority Areas).

### 5.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

All the potential environmental impacts associated with adoption and implementation of the proposed project were found to be either less than significant without mitigation or less than significant with mitigation, except for impacts to air quality (AIR), noise (NOISE), and wildfire (WILD), which were found to be significant and unavoidable with mitigation measures at the program level. Although the proposed General Plan 2040 results in significant and unavoidable impacts, the identification of these program-level impacts do not preclude the finding of less-than-significant impacts for subsequent development proposals analyzed at the project level that do not exceed the applicable project-level thresholds. The significant and unavoidable impacts identified for the proposed project include the following:

#### Air Quality

- **Impact AQ-2:** Construction of development projects that could occur from implementation of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds and cumulatively contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.
- **Impact AQ-3:** Operation of development projects under the proposed project would generate operational emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>).

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- **Impact AQ-4:** Construction emissions associated with development under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District’s project-level and cumulative significance thresholds.
- **Impact AQ-6:** Implementation of the proposed project would generate a substantial increase in emissions that exceeds the Bay Area Air Quality Management District’s significance thresholds and would cumulatively contribute to the nonattainment designations and health risk in the San Francisco Bay Area Air Basin.

### Noise

- **Impact NOISE-1:** Buildout under the proposed project is anticipated to result in unacceptable traffic noise with an increase of more than 5.0 dBA  $L_{dn}$  over existing conditions along one roadway segment (1<sup>st</sup> Avenue west of B Street) within the EIR Study Area.
- **Impact NOISE-6:** Buildout under the proposed project is anticipated to result in unacceptable cumulative traffic noise within the EIR Study Area.

### Wildfire

- **Impact WILD-2:** Development under the proposed project would increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.
- **Impact WILD-5:** Potential development under the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones, or Wildland Urban Interface, result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

The alternatives were selected because of their potential to further reduce and avoid these impacts.

## 5.4 OVERVIEW OF PROJECT ALTERNATIVES

Two project alternatives and the comparative merits of the alternatives are discussed in this section in accordance with the CEQA Guidelines.

The alternatives to be analyzed in comparison to the proposed project include:

- No Project Alternative, which would maintain the current adopted General Plan
- Reduced Traffic Noise Alternative

The first alternative is the CEQA-required “No Project” Alternative, which assumes the current General Plan 2030 and Climate Action Plan (CAP) remain in effect and are not replaced by the proposed project. The second alternative is the Reduced Traffic Noise Alternative and is intended to reduce traffic noise by reducing vehicle travel throughout the EIR Study Area. Under this alternative, the proposed CAP update would be adopted.

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### 5.4.1 ASSUMPTIONS AND METHODOLOGY

The alternatives analysis is presented as a comparative analysis to the proposed project. The development intensity for the alternatives varies from the proposed project. The estimated growth under each alternative, as well as the proposed project, is provided in Table 5-1, *Development Projections for the Proposed Project and Project Alternatives*.

**TABLE 5-1 DEVELOPMENT PROJECTIONS FOR THE PROPOSED PROJECT AND PROJECT ALTERNATIVES**

Category	Proposed General Plan 2040 (2040) <sup>a</sup>	No Project Alternative (2030) <sup>b</sup>	Reduced Traffic Noise Alternative (2040)
Housing Units	65,180	53,704	65,180
Population	160,040	133,749	160,040
Jobs	79,360	65,300	79,360

Sources and notes:

a. PlaceWorks, 2022.

b. Includes housing development required to achieve the City's 2023-2031 Regional Housing Needs Allocation, plus a buffer. See Table 5-3, *2030 Development Projections Under the No Project Alternative*. 2040 buildout under the No Project Alternative have not been calculated, as the City's existing General Plan has a horizon year of 2030 that would have to be updated to extend the buildout horizon past 2030. Overall, development under the current General Plan, as considered in the No Project Alternative, would be expected to be lower than the buildout analyzed for the proposed General Plan 2040.

The alternatives analysis assumes that all applicable mitigation measures recommended for the proposed project and the proposed General Plan 2040 goals, policies, and actions would apply to the Reduced Traffic Noise Alternative but would not apply to the No Project Alternative.

### 5.4.2 SUMMARY OF ALTERNATIVES EVALUATION

The following discussion compares the environmental impacts of the alternatives with those of the proposed project for each of the environmental topics analyzed in detail in Chapter 4, *Environmental Analysis*, of this Draft EIR. The impacts of each alternative are classified as less than (<), similar or comparable to (=), or greater than (>) the level of impacts associated with the proposed project. Table 5-2, *Comparison of Impacts of the Proposed Project and Project Alternatives*, summarizes the relative impacts of each of the alternatives compared to the proposed project.

## ALTERNATIVES

**TABLE 5-2 COMPARISON OF IMPACTS OF THE PROPOSED PROJECT AND PROJECT ALTERNATIVES**

Topic	Proposed Project <sup>a</sup>	No Project Alternative	Reduced Traffic Noise Alternative
Aesthetics	LTS	>	=
Air Quality	SU	=	<
Biological Resources	LTS	=	=
Cultural Resources	LTS	=	=
Energy	LTS	>	<
Geology and Soils	LTS	<	=
Greenhouse Gas Emissions	LTS	>	<
Hazards and Hazardous Materials	LTS	<	=
Hydrology and Water Quality	LTS	=	=
Land Use and Planning	LTS	>	<
Noise	SU	>	<
Parks and Recreation	LTS	<	=
Population and Housing	LTS	>	=
Public Services	LTS	<	=
Transportation	LTS	>	<
Tribal Cultural Resources	LTS	=	=
Utilities and Service Systems	LTS	>	=
Wildfire	SU	=	=

Notes:

<sup>a</sup>. The impacts listed in this column represent the highest significance determination for each respective standard of significance.

LTS	Less than Significant	<	Lessened impact in comparison to the proposed project
LTS/M	Less than Significant with Mitigation	=	Similar impact in comparison to the proposed project
SU	Significant and Unavoidable	>	Greater impact in comparison to the proposed project

## 5.5 NO PROJECT ALTERNATIVE (CURRENT GENERAL PLAN)

### 5.5.1 DESCRIPTION

Pursuant to CEQA Guidelines Section 15126.6(e)(1), the No Project Alternative is required as part of the “reasonable range of alternatives” to allow decision makers to compare the impacts of approving the proposed project with the impacts of taking no action or not approving the proposed project. Consistent with CEQA Guidelines Section 15126.6(e)(3)(A), when the project is the revision of a plan, as in this case, the no project alternative will be the continuation of the existing plan(s). Under the No Project Alternative, potential future development in San Mateo would continue to be subject to existing policies, regulations, development standards, and land use designations of the existing General Plan 2030 and the existing CAP.

As described in Chapter 3, *Project Description*, of this Draft EIR, the existing General Plan 2030 was adopted in 2010 and included a horizon year of 2030. While this horizon year is still 7 years away (as of the time of publishing this Draft EIR), in the years between 2010 and 2023 conditions inside and outside of San Mateo have changed, including the economic recovery from the Great Recession, a worsening housing crisis in California, ongoing impacts from climate change, and the COVID-19 pandemic that



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began in 2020. A number of State and federal laws guiding general plan policies have also been updated during this time.

Many of the community issues vetted in the General Plan 2030 are still relevant, well addressed, and do not require major changes. However, the No Project Alternative would not incorporate new topics that are now required by State law, such as environmental justice, and would not revise relevant policies and actions to meet those requirements. The No Project Alternative would also not address other emerging issues addressed in the proposed General Plan 2040, such as sea level rise, autonomous vehicles, and green infrastructure.

Pursuant to CEQA Guidelines Section 15126.6(e)(3)(C), the City of San Mateo, acting as the lead agency, should analyze the impacts of the No Project Alternative by projecting what would reasonably be expected to occur in the foreseeable future if the proposed project were not approved, based on current plans and consistent with available infrastructure and community services. Under the No Project Alternative, none of the applicable mitigation measures recommended for the proposed project would apply.

Buildout projections for the No Project Alternative are shown in Table 5-3, *2030 Development Projections Under the No Project Alternative*. In January 2023, the City adopted its 2023-2031 Housing Element, which is now part of the existing General Plan 2030 and identifies housing sites throughout the city that could be developed with up to 9,934 new housing units by January 2031. This covers the City's assigned regional housing needs allocation (RHNA) of 7,015 and provides a buffer. The buildout projections take into account baseline conditions for 2019 plus the buildout anticipated in the City's current General Plan.

**TABLE 5-3 2030 DEVELOPMENT PROJECTIONS UNDER THE NO PROJECT ALTERNATIVE**

Category	Existing Conditions (2019)	Adopted 2023-2031 Housing Element	2030 Buildout
Housing Units	43,770	9,934	53,704
Population	108,020	25,729 <sup>a</sup>	133,749
Jobs	62,440	N/A	65,300 <sup>b</sup>

Notes:

a. Population calculated based on an average household size of 2.59 persons per household (consistent with the household size used for the buildout projections in Chapter 3, *Project Description*, of this Draft EIR).

b. City of San Mateo, 2009, *General Plan Update Draft Environmental Impact Report*, page 4.2-6.

Source: City of San Mateo, 2009; PlaceWorks, 2022.

### 5.5.2 IMPACT DISCUSSION

The potential environmental impacts associated with the No Project Alternative when compared to the proposed project are described herein.

### 5.5.2.1 AESTHETICS

As described in Chapter 4.1, *Aesthetics*, of this Draft EIR, the proposed project would not result in any significant impacts related to aesthetics and no mitigation measures are required.

Unlike the proposed project, development that would occur under the No Project Alternative would not be concentrated in the ten General Plan Land Use Study Areas and instead would be spread throughout the city. This would result in the potential for greater impacts to scenic vistas when compared to the proposed project.

There are no officially designated scenic view corridors, vistas, or State-designated scenic highways within, or in the vicinity of, the EIR Study Area. Therefore, like the proposed project, the No Project Alternative would not damage existing scenic resources associated with scenic view corridors, vistas, or State-designated scenic highways and impacts would be similar.

Under both the proposed project and the No Project Alternative, future projects would be subject to applicable design review requirements prior to project approval pursuant to *San Mateo Design Guidelines* and would be required to comply with the applicable planning documents that govern scenic quality in the city, as described in Section 4.1.1.1, *Regulatory Framework*, in Chapter 4.1. However, the No Project Alternative would not include the new or modified goals, policies, or actions that were prepared as part of the proposed General Plan 2040. Thus, unlike the proposed project, development under this alternative would not provide the same level of design consideration related to the visual character or quality of a project site and its surroundings. Impacts would be greater than those of the proposed project.

Similar to the proposed project, the No Project Alternative would result in new lighting sources that could result in sources of glare. Potential future development under both the proposed project and the No Project Alternative would be required to comply with best management practices in CALGreen and the San Mateo Municipal Code (SMMC) provisions that ensure new land uses do not generate excessive light levels and that future development reduce light and glare spillover to surrounding land uses. However, the No Project Alternative would not include the new or modified goal and policy prepared as part of the proposed General Plan that require nighttime lighting to be energy efficient, protect dark skies, and minimize light spillage to adjacent properties. Therefore, impacts related to light and glare would be greater when compared to the proposed project.

Overall, development in the EIR Study Area under the No Project Alternative would continue to be subject to the current policies and regulations that guide development in San Mateo and would not include the new or modified goals, policies, or actions of the proposed General Plan. As such, impacts related to aesthetics would be *greater* when compared to the proposed project.

### 5.5.2.2 AIR QUALITY

As described in Chapter 4.2, *Air Quality*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts during the construction and operational phases even with implementation of Mitigation Measures AQ-2, AQ-3, and AQ-4.

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The No Project Alternative would continue development as allowed under the existing General Plan 2030, which would result in less development in the EIR Study Area compared to the proposed project. Development under both the proposed project and the No Project Alternative would be subject to the Bay Area Air Quality Management District's (BAAQMD's) basic control measures for fugitive dust control and screening sizes. Additionally, future development under both the proposed project and the No Project Alternative could result in construction activities within 1,000 feet of residential and other sensitive land uses, thus, temporarily elevating concentrations of toxic air contaminants and diesel particulate matter in the vicinity of sensitive land uses. While future development under the No Project Alternative would be subject to the same regulations as the proposed project to mitigate construction impacts, less development—and thus reduced emission levels—would occur under the No Project Alternative; therefore, construction air quality impacts would be lessened when compared to the proposed project.

Under the No Project Alternative, reduced development would occur compared to the proposed project; therefore, reduced direct and indirect criteria air pollutant emissions from energy (e.g., natural gas use) and area sources (e.g., aerosols and landscaping equipment) would occur. Under both the proposed project and the No Project Alternative, subsequent environmental review of applicable development projects would be required to assess potential impacts under BAAQMD's project-level thresholds. As demonstrated in Chapter 4.15, *Transportation*, the total vehicle miles traveled (VMT) per capita and VMT per employee would be lower under the proposed project than existing 2020 conditions (14.6 VMT per capita compared to the existing 2020 conditions of 16.0 VMT per capita, and 15.3 VMT per employee compared to existing 2020 conditions of 16.4 VMT per employee). This reduction is due to focusing future development under the proposed project near public transit. Although both the proposed project and the No Project Alternative would increase total VMT in comparison to existing conditions, the No Project Alternative would not include the new and modified goals, policies, or actions in the proposed General Plan 2040 that aim to concentrate development in the ten General Plan Land Use Study Areas and site future development near public transit and existing services. Therefore, while the No Project Alternative would result in less overall development than the proposed project, development would be less efficient as measured by VMT per capita and per employee metrics. Overall, operational air quality impacts would be considered greater when compared to the proposed project.

Under the No Project Alternative, the City's existing CAP would remain in place. Because the proposed CAP update does not include changes to the strategies in the City's existing CAP, under both the proposed project and the No Project Alternative the City's CAP would be consistent with the BAAQMD's 2017 Clean Air Plan goal to reduce GHG emissions and protect the climate.

Overall, because the No Project Alternative would result in less concentrated development and generate more VMT per service population, the operational impacts would be greater than the proposed project. However, due to the proposed project having a higher development potential, the construction impacts would be greater than under the No Project Alternative. Overall, the No Project Alternative would result in *similar* air quality impacts when compared to the proposed project.

### 5.5.2.3 BIOLOGICAL RESOURCES

As described in Chapter 4.3, *Biological Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to biological resources and no mitigation measures are required.

The EIR Study Area is not within any local, regional, or State habitat conservation plan areas. Therefore, neither the proposed project nor the No Project Alternative would conflict with the conservation strategy in any Habitat Conservation Plan or Natural Community Conservation Plan and impacts would be similar.

Potential future development under the proposed project could potentially affect special-status species, riparian habitats, wetlands, and wildlife movement corridors. Adherence to the new and modified goals, policies, and actions of the proposed General Plan 2040 as well as all federal, State, and local regulations relating to biological resources would fully mitigate any potential impacts. While the No Project Alternative would not include the new and modified goals, policies, or actions of the proposed General Plan to reduce effects to biological resources, because the No Project Alternative would result in less development than the proposed project, fewer potential impacts to special-status species, riparian habitats, wetlands, and wildlife movement corridors would occur, and impacts to these resources would be similar when compared to the proposed project.

Therefore, impacts to biological resources from potential future development as allowed under the No Project Alternative would be *similar* when compared to the proposed project.

### 5.5.2.4 CULTURAL RESOURCES

As described in Chapter 4.4, *Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to cultural resources and no mitigation measures are required.

Under the No Project Alternative, new development would continue throughout the EIR Study Area under existing plans and regulations. As explained in Chapter 4.4, there are existing prehistoric, architectural, historical, and archaeological resources in the EIR Study Area that could be adversely affected by new demolition, inappropriate building modification, or incompatible new construction. These effects would be similar under both the proposed project and the No Project Alternative. Like the proposed project, the No Project Alternative would be subject to the same federal, State, and local regulations to reduce adverse effects to cultural resources, such as those in the Public Resources Code, California Health and Safety Code, and the California Code of Regulations. However, because less development would occur under the No Project Alternative, the potential to affect these resources would be lessened when compared to the proposed project.

The proposed project includes new and modified General Plan 2040 goals, policies, and actions that require additional considerations to further protect historic and archaeological resources in the EIR Study Area. Under the No Project Alternative, these goals, policies, and actions would not be adopted. Therefore, overall, the No Project Alternative would have *similar* impacts to cultural resources as compared to the proposed project when following common protocols.

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### 5.5.2.5 ENERGY

As described in Chapter 4.5, *Energy*, of this Draft EIR, the proposed project would not result in any significant impacts related to energy and no mitigation measures are required.

All development in California is required to comply with building requirements in the California Green Building Code and Building and Energy Efficiency Standards, which ensure new development would not result in the wasteful or inefficient use of energy. Additionally, neither the proposed project nor the No Project Alternative would introduce a level of development and population growth that would be anticipated to necessitate the construction of new energy supply facilities or transmission infrastructure.

The proposed project includes new and modified General Plan goals, policies, and actions that require additional actions that would further ensure energy efficiency in the EIR Study Area. These include coordinating with interagency partners and community stakeholders to seek funding opportunities to design, construct, and build the priority projects identified in the Transit-Oriented Development Access Pedestrian Plan. Because transportation is a leading source of energy use in San Mateo, these new and modified goals, policies, and actions promote energy conservation from the transportation sector by increasing safe and sufficient transit, bicycle, and pedestrian facilities to reduce automobile use and VMT. The No Project Alternative would not adopt these new and modified General Plan goals, policies, or actions. As described in Section 5.4.2.2, Air Quality, because the No Project Alternative would result in less concentrated development, it would generate a higher level of VMT per service population and would therefore represent less efficient energy usage for transportation.

Under the No Project Alternative, the City's existing CAP would remain in place. Because the proposed CAP update does not include changes to the strategies in the City's existing CAP, under both the proposed project and the No Project Alternative the City's CAP would contribute toward minimizing inefficient, wasteful, or unnecessary transportation energy consumption, and ensure compliance with State, regional, or local plans for renewable energy.

Less development would occur under the No Project Alternative, so energy consumption from construction would be reduced when compared to the proposed project. However, overall impacts related to energy use from VMT would be *greater* under the No Project Alternative because while there is less development potential, future development would not be focused near public transit and energy usage would be less efficient when compared to the proposed project.

### 5.5.2.6 GEOLOGY AND SOILS

As described in Chapter 4.6, *Geology and Soils*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to geology and soils and no mitigation measures are required.

Future development under both the proposed project and the No Project Alternative would be subject to the same federal, State, and local regulations that address and prevent hazards associated with geology, soils, and seismicity. Although the No Project Alternative would result in less overall development, compliance with existing regulations related to geologic and seismic safety would apply similarly to future development under both the No Project Alternative and the proposed project.

While State and local regulations to reduce hazards related to geology and soils would apply equally under both the proposed project and the No Project Alternative, there is less development potential under the No Project Alternative and therefore fewer structures and people would be exposed to potential geologic hazards. Therefore, the No Project Alternative would result in *lessened* geological impacts than when compared to the proposed project.

### 5.5.2.7 GREENHOUSE GAS EMISSIONS

As described in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would result in less-than-significant impacts and no mitigation measures are required when applying program-level thresholds for the forecast year 2040.

New buildings constructed under both the proposed project and the No Project Alternative would be subject to the triennial updates to California's Building and Energy Efficiency Standards, which would presumably become more stringent over time. While new buildings would be more energy efficient, there would be an overall increase in energy usage under the proposed project from construction when compared to the No Project Alternative, due to the greater amount of proposed growth. Since the No Project Alternative would result in less development than the proposed project, GHG emissions from construction and stationary sources use would be lessened under the No Project Alternative.

As described in Section 5.4.2.2, Air Quality, because the No Project Alternative would result in less concentrated development, it would generate a higher level of VMT per service population. The No Project Alternative would not include the new and modified goals, policies, actions, or land use mix of the proposed General Plan 2040 that would site future development near public transit and existing services to reduce GHG emissions associated with vehicular travel. Therefore, while the No Project Alternative would result in less overall development than the proposed project, development would be less efficient as measured by VMT per capita and per employee metrics. Overall, GHG emission impacts from mobile sources under the No Project Alternative would be considered greater than under the proposed project.

Under the No Project Alternative, the City's existing CAP would remain in place. The City's existing CAP includes forecasts for 2020, 2030, and 2050 to demonstrate compliance with the targets of Assembly Bill 32, Senate Bill 32, and Executive Order S-03-05, respectively. The CAP update under the proposed project would include a new forecast for 2045, consistent with Assembly Bill 1279, which directs a minimum statewide reduction of GHGs to at least 85 percent below 1990 levels by 2045. Without the CAP update, the City cannot show compliance with AB 1279. In addition, while the existing CAP demonstrates consistency with Executive Order S-03-05 for achieving an 80 percent reduction from 1990 levels by 2050, by updating the reduction target and forecasts consistent with AB 1279 and achieving an 85 percent reduction by 2045, the proposed CAP update accelerates the GHG reduction schedule and increases the GHG reduction amount. The No Project Alternative would not include these updates to the City's CAP.

In summary, overall impacts from GHG emissions under the No Project Alternative would be *greater* when compared to the proposed project.



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### 5.5.2.8 HAZARDS AND HAZARDOUS MATERIALS

As described in Chapter 4.8, *Hazards and Hazardous Materials*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to hazards and hazardous materials and no mitigation measures are required.

Potential future development that could occur in the EIR Study Area from implementation of both the proposed project and the No Project Alternative would be required to comply with all federal, State, and local regulations pertaining to hazards and hazardous materials. However, because there is less development potential under the No Project Alternative, potential risks associated with transport, use, disposal, emission, or storage of hazardous materials would be lessened. Neither the proposed project nor the No Project Alternative would be expected to expose people to excessive airport-related noise, or to impair an emergency evacuation plan.

Overall, the No Project Alternative would have slightly *lessened* impacts when compared to the proposed project.

### 5.5.2.9 HYDROLOGY AND WATER QUALITY

As described in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, the proposed project would not result in any significant impacts related to hydrology and water quality and no mitigation measures are required. Compliance with existing State and local regulations and procedures would ensure that pre- and post-construction impacts to water quality would be less than significant.

The No Project Alternative would result in less development overall than the proposed project. However, due to the built-out nature of the EIR Study Area, under both the proposed project and the No Project Alternative nearly all future development would occur within previously urbanized areas. Much like the proposed project, the No Project Alternative would connect to existing drainage systems already in place and would be subject to the same existing federal, State, and local regulations relating to hydrology and water quality. Compliance with existing regulations would minimize pre- and post-construction impacts to water quality as future development occurs under both the proposed project and the No Project Alternative.

The proposed project includes new and modified General Plan 2040 goals, policies, and actions related to hydrology and water quality to further minimize impacts. For example, new and modified General Plan 2040 policies and actions would require the City to coordinate with Cal Water and Estero Municipal Improvement District upon each update of the respective Urban Water Management Plans and track, and make available to the community, water use by land use type. However, under the No Project Alternative, these new and modified goals, policies, and actions would not be implemented.

While the No Project Alternative involves less development potential, this alternative would continue implementation of General Plan 2030 and would not implement the new and modified policies of the proposed General Plan 2040 to further minimize impacts related to hydrology and water quality. Therefore, overall, the No Project Alternative would have *similar* impacts to hydrology and water quality when compared to the proposed project.

### 5.5.2.10 LAND USE AND PLANNING

As described in Chapter 4.10, *Land Use and Planning*, of this Draft EIR, the proposed project would not result in any significant impacts related to land use and planning and no mitigation measures are required.

The existing General Plan 2030 was adopted with the purpose of harmonizing changes to existing developed areas to better serve community needs. Both the proposed project and the No Project Alternative would aim to improve connectivity and integrate infill development, and would not create physical barriers within existing communities. Accordingly, impacts related to division of an established community would be similar under both the proposed project and the No Project Alternative.

Under the No Project Alternative, development would continue to occur throughout the EIR Study Area under the existing General Plan 2030 and would not conflict with the City's development standards currently in place. However, the No Project Alternative would not implement new and modified General Plan 2040 goals, policies, or actions, nor would it focus development in the ten General Plan Land Use Study Areas. Therefore, in comparison to the proposed project, the No Project Alternative would not achieve the same level of consistency with the intent of *Plan Bay Area 2050*, which provides a framework for future development in the Bay Area to meet the State's GHG and VMT reduction goals through the concentration of development in downtowns and centers near jobs and services. Therefore, impacts under the No Project Alternative would be *greater* than under the proposed project.

### 5.5.2.11 NOISE

As described in Chapter 4.11, *Noise*, of this Draft EIR, the proposed project would result in significant and unavoidable project-level and cumulative impacts due to a modeled traffic noise increase of more than 5.0 dBA Ldn over existing conditions along one roadway segment within the EIR Study Area.

Future development allowed under the proposed project would be subject to the standards of the SMMC as well as the new and modified goals, policies, and actions of the proposed General Plan 2040, including those relating to the interface between residential and nonresidential land uses. As specific uses are proposed for particular sites, project-level design, permitting, and/or environmental review would serve to ensure that individual uses would comply with the noise regulations. Future development under the No Project Alternative would also be subject to these applicable standards but would continue compliance with the existing General Plan 2030 rather than implementing the new and modified General Plan 2040 goals, policies, and actions. However, because the No Project Alternative would result in less development, less construction would occur, and there would be lessened construction-related noise and vibration impacts.

The No Project Alternative would not include the new and modified goals, policies, or actions in the proposed General Plan 2040 that aim to concentrate development in the ten General Plan Land Use Study Areas and would thereby lessen the benefits gained from siting future development near public transit and existing services to reduce VMT. As a result, it is expected that VMT per capita and per employee would be higher than under the proposed project, which would increase overall vehicle traffic noise levels throughout the EIR Study Area when compared to the proposed project. Therefore, the No

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Project Alternative would have the potential to worsen the significant and unavoidable impacts identified for the proposed project.

While the No Project Alternative would result in lessened construction noise impacts, it would worsen the significant and unavoidable noise impacts of the proposed project. Therefore, overall impacts would be considered *greater* under the No Project Alternative when compared to the proposed project.

### 5.5.2.12 PARKS AND RECREATION

As discussed in Chapter 4.12, *Parks and Recreation*, of this Draft EIR, the proposed project would not result in any significant impacts related to parks and recreation, and no mitigation measures are required.

The No Project Alternative would result in fewer new residents and jobs in the EIR Study Area and, therefore, would result in a lower level of demand on the parks and recreation areas that serve the EIR Study Area. Like the proposed project, potential future development under the No Project Alternative would be required to comply with all existing City regulations that require development to either provide parkland or pay in-lieu fees for the City to dedicate parkland elsewhere.

Overall, impacts under the No Project Alternative would be slightly *lessened* when compared to those of the proposed project.

### 5.5.2.13 POPULATION AND HOUSING

As described in Chapter 4.13, *Population and Housing*, of this Draft EIR, the proposed project would not result in any significant impacts related to population and housing, and no mitigation measures are required. It is important to note that Chapter 4.13 utilizes regional projections from ABAG's *Plan Bay Area 2040* because *Plan Bay Area 2050* does not provide growth projections at the city level. As described in Chapter 4.13, the proposed project would exceed the projections in *Plan Bay Area 2040* for San Mateo but would generally be in line with county-level projections in *Plan Bay Area 2050*.

Chapter 4.13 compares the 2040 development projections of the proposed project to ABAG's 2040 projections. Projections under the No Project Alternative for 2040 have not been calculated, as the City's existing General Plan has a horizon year of 2030. Regional projections for 2030 provided in *Plan Bay Area 2040* are therefore used for this analysis.

As shown in Table 5-1, *Development Projections for the Proposed Project and Project Alternatives*, the No Project Alternative is assumed to have a 2030 buildout potential of 53,704 housing units, 133,749 residents, and 65,300 jobs. In comparison, ABAG projects 48,335 housing units, 123,200 residents, and 66,510 jobs in San Mateo in 2030.<sup>1</sup> While the No Project Alternative would not exceed ABAG's jobs projections, it would exceed population and housing projections. Therefore, the development

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<sup>1</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, updated May 1, 2019, Projections 2040 by Jurisdiction, <https://data.bayareametro.gov/Demography/Projections-2040-by-Jurisdiction/grqz-amra>, accessed February 16, 2023.

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projections for both the proposed project and No Project Alternative would exceed regional projections published in *Plan Bay Area 2040*.<sup>2</sup>

Unlike the proposed project, the No Project Alternative would not include the updated policy framework that ensures adequate planning to accommodate population increases and future development beyond 2030.

As under the proposed project, implementation of the No Project Alternative would result in a net increase in housing; therefore, it would not require replacement housing outside of the EIR Study Area. Therefore, potential impacts associated with displacement under the No Project Alternative would be similar when compared to those of the proposed project.

In summary, while the No Project Alternative involves a reduced buildout potential in comparison to the proposed project, impacts related to population and housing would be *greater* when compared to the proposed project as the current General Plan 2030 has not been updated to comprehensively account for changes through 2040.

### 5.5.2.14 PUBLIC SERVICES

As described in Chapter 4.14, *Public Services*, of this Draft EIR, impacts under the proposed project to public services were found to be less than significant, and no mitigation measures are required.

The No Project Alternative would result in fewer new residents and jobs in the EIR Study Area, and, therefore, would result in a lower level of demand on the public service providers that serve the EIR Study Area. Potential future development under the No Project Alternative would be required to comply with all existing City regulations adopted to ensure that development pays its fair share of the cost of delivering services and providing libraries, while payment of property taxes would ensure that future development pays its fair share towards schools.

Overall, impacts under the No Project Alternative would be slightly *lessened* than those of the proposed project.

### 5.5.2.15 TRANSPORTATION

As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project would result in less-than-significant transportation impacts and no mitigation measures are required.

Like the proposed project, the No Project Alternative would be subject to the same federal, State, and local City design standards to ensure that future development does not increase hazards due to a geometric design feature or incompatible uses, and that development provides adequate emergency access. Therefore, the No Project Alternative would have a similar impact when compared to the proposed project in terms of transportation safety.

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<sup>2</sup> The updated *Plan Bay Area 2050* does not provide growth projections at the city level to enable comparison to local plans.

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The proposed project would focus potential future development in the ten General Plan Land Use Study Areas. As such, the VMT generated by potential future development under the proposed project would be lower than if development were proposed in areas not served by public transportation and a network of sidewalks and bicycle facilities. As described in Chapter 4.15, *Transportation*, VMT per capita and VMT per employee would be lower under the proposed project than existing 2020 conditions (14.6 VMT per capita compared to the existing 2020 conditions of 16.0 VMT per capita, and 15.3 VMT per employee compared to existing 2020 conditions of 16.4 VMT per employee). This reduction is due to focusing future development under the proposed project near public transit. The No Project Alternative would not include the new and modified goals, policies, or actions in the proposed General Plan 2040 that aim to concentrate development in the ten General Plan Land Use Study Areas and would thereby lessen the benefits gained from siting future development near public transit and existing services to reduce VMT. Therefore, it is expected that the No Project Alternative would result in greater VMT impacts when compared to the proposed project.

In summary, overall impacts from transportation under the No Project Alternative would be *greater* when compared to the proposed project because VMT would be greater under the No Project Alternative and the net benefits of new and modified General Plan 2040 goals, policies, and actions that reduce VMT would not be realized.

### 5.5.2.16 TRIBAL CULTURAL RESOURCES

As described in Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to tribal cultural resources and no mitigation measures are required.

Under the No Project Alternative, new development would continue throughout the EIR Study Area under existing plans and regulations. As under the proposed project, existing archaeological resources, including Native American artifacts and human remains, present in the EIR Study Area, could be affected by construction activities under the No Project Alternative. Like the proposed project, the No Project Alternative would be subject to the same federal, State, and local regulations to mitigate impacts to tribal cultural resources, such as those in the Public Resources Code, California Health and Safety Code, and the California Code of Regulations. Because less development would occur under the No Project Alternative, the potential to impact these resources during construction would be lessened when compared to the proposed project.

The proposed project includes new and modified General Plan goals, policies, and actions that require additional considerations that would further protect tribal cultural resources in the EIR Study Area. Under the No Project Alternative, these goals, policies, and actions would not be adopted.

Overall, the No Project Alternative would have *similar* impacts to tribal cultural resources as compared to the proposed project when following common protocols.

### 5.5.2.17 UTILITIES AND SERVICE SYSTEMS

As described in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, impacts to water, wastewater, solid waste, stormwater, and energy infrastructure under the proposed project were found to be less than significant with the compliance of all applicable regulations. No mitigation measures are required.

Demand and consumption trends generally demonstrate that advances in recycling and solid waste reduction requirements, water-efficient regulations in building and landscaping, and stricter stormwater retention requirements would reduce utility and service systems demands from existing conditions, or result in more efficient use of utilities. These trends would continue under both the proposed project and the No Project Alternative. Much like the proposed project, the No Project Alternative would connect to existing systems already in place and would be subject to the same existing federal, State, and local regulations related to utility usage. However, the proposed project includes new and modified General Plan 2040 goals, policies, and actions related to utilities to further minimize impacts, including policies to ensure increased water efficiency, implement the recently approved Sewer System Management Plan, encourage low impact development, and increased coordination with water suppliers in water supply planning efforts.

Overall, although the No Project Alternative would result in less development, impacts under the No Project Alternative would be *greater* when compared to the proposed project.

### 5.5.2.18 WILDFIRE

As described in Chapter 4.18, *Wildfire*, of this Draft EIR, the proposed project would result in significant and unavoidable project-level and cumulative impacts due to development under the proposed project increasing population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

Although the goals, policies, and actions identified in the proposed General Plan 2040 provide the best wildfire hazard reduction measures available, the majority of western San Mateo is in a Very High Fire Hazard Severity Zone (VHFHSZ) and/or the Wildland Urban Interface (WUI). Prohibiting new development in this portion of San Mateo is not feasible or practical because the City has a responsibility to meet other, conflicting obligations, including increasing the number and type of housing available and allowing reconstruction of homes burned by wildfires. While the No Project Alternative would result in less development, the No Project Alternative would not adopt the new and modified goals, policies, or actions of the proposed General Plan, and development would still occur in the VHFHSZ and/or the WUI. Therefore, implementation of the No Project Alternative would have *similar* impacts when compared to the proposed project.

## 5.5.3 RELATIONSHIP OF THE ALTERNATIVES TO THE OBJECTIVES

As listed in Section 5.2, *Project Objectives*, the primary purposes of the proposed project are to plan for the growth and conservation of San Mateo over a 20-year time horizon. This requires extending the buildout horizon to year 2040 and updating goals, policies, and actions so that they meet current State

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requirements and community priorities. The objectives also include identifying the location and allowed density and intensity of San Mateo's land use; planning for future circulation and infrastructure improvements; identifying sufficient residential land to meet the current and future housing needs; protecting natural resources and preserving and improving open space; protecting residents from harmful or disruptive levels of noise; keeping the community safe from natural and human-caused hazards; and improving the safety and quality of life for residents of neighborhoods that face a combination of both higher-than-average pollution exposure and social and economic challenges.

Under the No Project Alternative, the proposed project would not be implemented, and the proposed goals, policies, and actions intended to address objectives would not be adopted. Therefore, this alternative would not fully accomplish any of the project objectives.

## 5.6 REDUCED TRAFFIC NOISE ALTERNATIVE

### 5.6.1 DESCRIPTION

The purpose of the Reduced Traffic Noise Alternative is to reduce significant and unavoidable impacts associated with traffic noise.

As described in Chapter 4.11, *Noise*, buildout under the proposed project based on modeling conducted for this EIR shows an increase above acceptable levels over existing conditions along one roadway segment. The Reduced Traffic Noise Alternative would involve enhanced transportation demand management (TDM) measures to reduce vehicle travel to a greater extent than under the proposed project. Specifically, it is assumed that this alternative would involve a new TDM program applicable to new development as well as existing residences, employees, and businesses. New TDM requirements may include a combination of the following, or similar, measures for employees and residents:

- Transit passes and subsidies
- E-bike subsidies
- Ride sharing subsidies
- Free bicycles

In addition, this alternative would involve increased funding allocations to fully implement the City's Bicycle Master Plan and Pedestrian Master Plan as expeditiously as possible, in order to provide expanded and safer alternatives to driving and encourage higher participation in TDM initiatives.

The Reduced Traffic Noise Alternative would accommodate the same amount of proposed development as the proposed project and would involve the same proposed General Plan land use map, designations, goals, policies, and actions. This alternative would also include the same technical update to the City's 2020 CAP that would occur under the proposed project.

The alternatives analysis assumes that all applicable mitigation measures recommended for the proposed project would apply to the Reduced Traffic Noise Alternative.



## 5.6.2 IMPACT DISCUSSION

The potential environmental impacts associated with the Reduced Traffic Noise Alternative when compared to the proposed project are described herein.

### 5.6.2.1 AESTHETICS

As described in Chapter 4.1, *Aesthetics*, of this Draft EIR, the proposed project would not result in any significant impacts related to aesthetics and no mitigation measures are required.

The Reduced Traffic Noise Alternative would involve the same growth potential and land use pattern as would occur under the proposed project. As under the proposed project, potential future development under the Reduced Traffic Noise Alternative would be anticipated to occur in the ten General Plan Land Use Study Areas where future development would have a lesser impact on scenic vistas. Furthermore, there are no officially designated scenic view corridors, vistas, or State-designated scenic highways within, or in the vicinity of, the EIR Study Area. Like the proposed project, applicable future projects under the Reduced Traffic Noise Alternative would be subject to design review prior to project approval pursuant to *San Mateo Design Guidelines* and compliance with the various planning documents that govern scenic quality in the city, as described in Section 4.1.1.1, *Regulatory Framework*, in Chapter 4.1. Therefore, overall impacts to scenic corridors, vistas, and highways would be similar under both the proposed project and the Reduced Traffic Noise Alternative.

The Reduced Traffic Noise Alternative, like the proposed project, would benefit from the new and modified General Plan goals, policies, and actions and would be required to comply with best management practices in CALGreen and SMMC provisions that ensure new land uses do not generate excessive light levels and that future development reduce light and glare spillover to surrounding land uses. Therefore, impacts from light and glare under the Reduced Traffic Noise Alternative would be similar when compared to the proposed project.

The Reduced Traffic Alternative would not propose any changes from the proposed project that would affect aesthetic impacts. The Reduced Traffic Alternative is focused on TDM measures, such as transit passes and subsidies, e-bike subsidies, and free bicycles. None of these measures would affect aesthetic resources. Under the Reduced Traffic Noise Alternative, the same level of development would occur in the same concentrated areas as the proposed project and would be guided by the same regulations. Therefore, the Reduced Traffic Noise Alternative would result in *similar* aesthetics impacts when compared to the proposed project.

### 5.6.2.2 AIR QUALITY

As described in Chapter 4.2, *Air Quality*, of this Draft EIR, the proposed project would result in significant and unavoidable impacts during the construction and operational phases even with implementation of Mitigation Measures AQ-2, AQ-3, and AQ-4.

Similar to the proposed project, implementation of the Reduced Traffic Noise Alternative would not conflict with the BAAQMD Clean Air Plan or generate any substantial odors.

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The Reduced Traffic Noise Alternative would include development as allowed under the proposed project but would involve enhanced TDM requirements applicable to new development as well as existing residences, employees, and businesses. Through the new TDM program, vehicle traffic, a major source of criteria air pollutants, would be reduced. Therefore, impacts would be lessened when compared to the proposed project.

Under the Reduced Traffic Noise Alternative, the proposed CAP update would be adopted and, as under the proposed project, would be consistent with the BAAQMD's 2017 Clean Air Plan's goal to reduce GHG emissions and protect the climate.

Overall, because the Reduced Traffic Noise Alternative would result in less vehicle traffic, air quality impacts under the Reduced Traffic Noise Alternative would be *lessened* when compared to the proposed project.

### 5.6.2.3 BIOLOGICAL RESOURCES

As described in Chapter 4.3, *Biological Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to biological resources and no mitigation measures are required.

The Reduced Traffic Noise Alternative would involve the same growth potential and land use pattern as would occur under the proposed project. Potential future development would still be anticipated to occur in the ten General Plan Land Use Study Areas where future development would have a lesser impact on biological resources. Like the proposed project, adherence to the new and modified goals, policies, and actions of the proposed General Plan 2040 as well as all federal, State, and local regulations relating to biological resources would reduce effects to biological resources under the Reduced Traffic Noise Alternative. Therefore, the Reduced Traffic Noise Alternative would have a *similar* level of impact as the proposed project.

### 5.6.2.4 CULTURAL TRIBAL RESOURCES

As described in Chapter 4.4, *Cultural Tribal Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to cultural resources and no mitigation measures are required.

The Reduced Traffic Noise Alternative would involve the same growth potential and land use pattern as would occur under the proposed project. Therefore, under both the proposed project and the Reduced Traffic Noise Alternative, the same resources would have the potential to be affected by construction activities. Like the proposed project, the Reduced Traffic Noise Alternative would be subject to the same federal, State, and local regulations to mitigate impacts to cultural resources, such as those in the Public Resources Code, California Health and Safety Code, and the California Code of Regulations. The proposed General Plan 2040 new and modified goals, policies, and actions that require additional considerations to further protect historic and archaeological resources in the EIR Study Area would also be implemented under this alternative. Therefore, the Reduced Traffic Noise Alternative would have *similar* impacts to cultural resources when compared to the proposed project.

### 5.6.2.5 ENERGY

As described in Chapter 4.5, *Energy*, of this Draft EIR, the proposed project would not result in any significant impacts related to energy and no mitigation measures are required.

All development that occurs in the State is required to comply with best management practices regulated in the California Green Building Code and Building and Energy Efficiency Standards, which ensure new development would not result in the wasteful or inefficient use of energy. Additionally, neither the proposed project nor the Reduced Traffic Noise Alternative would introduce a level of development and population growth that would be anticipated to necessitate the construction of new energy supply facilities or transmission infrastructure.

Furthermore, the Reduced Traffic Noise Alternative, like the proposed project, would include new and modified General Plan goals, policies, and actions that would further ensure energy efficiency in the EIR Study Area. These include enhanced TDM requirements applicable to new development as well as existing residences, employees, and businesses. Through the new TDM program, vehicle traffic and VMT would be reduced when compared to the proposed project. Because transportation is a leading source of energy use in San Mateo, these new and modified goals, policies, and actions promote energy conservation from the transportation sector by increasing safe and sufficient transit, bicycle, and pedestrian facilities to reduce automobile use and VMT.

The same amount of development would occur under the Reduced Traffic Noise Alternative, so energy consumption from construction would be similar when compared to the proposed project. Energy use from VMT would be lessened under the Reduced Traffic Noise Alternative with implementation of enhanced TDM requirements.

Under the Reduced Traffic Noise Alternative, the proposed CAP update would be adopted and would contribute toward minimizing inefficient, wasteful, or unnecessary transportation energy consumption, and ensure compliance with State, regional, or local plans for renewable energy.

Overall, energy related impacts would be *lessened* under the Reduced Traffic Noise Alternative when compared to the proposed project due to the reduced energy usage for transportation.

### 5.6.2.6 GEOLOGY AND SOILS

As described in Chapter 4.6, *Geology and Soils*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to geology and soils and no mitigation measures are required.

Future development under both the proposed project and the Reduced Traffic Noise Alternative would be concentrated in the ten General Plan Land Use Study Areas and would be subject to the same federal, State, and local regulations that address and prevent hazards associated with geology, soils, and seismicity. The Reduced Traffic Noise Alternative would result in the same overall development and compliance with existing regulations related to geologic and seismic safety would apply similarly to both future development under the Reduced Traffic Noise Alternative and the proposed project.

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Therefore, geological impacts of the Reduced Traffic Noise Alternative would be *similar* when compared to the proposed project.

### 5.6.2.7 GREENHOUSE GAS EMISSIONS

As described in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, the proposed project would result in less-than-significant impacts and no mitigation measures are required when applying program-level thresholds for the forecast year 2040.

New buildings constructed under both the proposed project and the Reduced Traffic Noise Alternative would be subject to the triennial updates to California's Building and Energy Efficiency Standards, which would presumably become more stringent over time. Energy usage due to construction of future development projects under the Reduced Traffic Noise Alternative would be similar to those of the proposed project.

The Reduced Traffic Noise Alternative would adopt the same goals, policies, and actions as the proposed project. However, unlike the proposed project, the Reduced Traffic Noise Alternative would introduce enhanced TDM requirements applicable to new development as well as existing residences, employees, and businesses. Through the new TDM program, vehicle traffic and VMT would be reduced, which in turn would decrease GHG emissions.

Under the Reduced Traffic Noise Alternative, the proposed CAP update would be adopted and, as under the proposed project, would include a new forecast for 2045, consistent with Assembly Bill 1279, which directs a minimum statewide reduction of GHGs to at least 85 percent below 1990 levels by 2045.

Overall, because the Reduced Traffic Noise Alternative would reduce GHG emissions from vehicle travel, impacts would be *lessened* when compared to the proposed project.

### 5.6.2.8 HAZARDS AND HAZARDOUS MATERIALS

As described in Chapter 4.8, *Hazards and Hazardous Materials*, of this Draft EIR, the proposed project would result in less-than-significant impacts related to hazards and hazardous materials and no mitigation measures are required.

Potential future development that could occur in the EIR Study Area from implementation of both the proposed project and the Reduced Traffic Noise Alternative would be required to comply with all federal, State, and local regulations pertaining to hazards and hazardous materials. Like the proposed project, the Reduced Traffic Noise Alternative would implement new and modified General Plan 2040 goals, policies, and actions that would further reduce impacts related to hazardous materials, airport-related noise, and emergency evacuation plans. Therefore, the Reduced Traffic Noise Alternative would have a *similar* impact when compared to the proposed project.

### 5.6.2.9 HYDROLOGY AND WATER QUALITY

As described in Chapter 4.9, *Hydrology and Water Quality*, of this Draft EIR, the proposed project would not result in any significant impacts related to hydrology and water quality and no mitigation measures are required. Compliance with existing State and local regulations and procedures would ensure that pre- and post-construction impacts to water quality would be less than significant.

Similar to the proposed project, future development under the Reduced Traffic Noise Alternative would occur within previously urbanized areas and connect to existing drainage systems already in place. The Reduced Traffic Noise Alternative would be subject to the same existing federal, State, and local regulations relating to hydrology and water quality as the proposed project. Compliance with existing regulations would ensure that pre- and post-construction impacts to water quality are minimized as future development occurs. Additionally, future development under the Reduced Traffic Noise Alternative would be subject to the new and modified General Plan 2040 goals, policies, and actions related to hydrology and water quality to further minimize impacts.

Overall, hydrology and water quality impacts would be *similar* to those of the proposed project.

### 5.6.2.10 LAND USE AND PLANNING

As described in Chapter 4.10, *Land Use and Planning*, of this Draft EIR, the proposed project would not result in any significant impacts related to land use and planning and no mitigation measures are required.

The Reduced Traffic Noise Alternative would involve the same growth potential and land use pattern as would occur under the proposed project. Both the proposed project and the Reduced Traffic Noise Alternative would aim to improve connectivity and integrate infill development, and they would not create physical barriers within existing communities. Accordingly, impacts related to the division of an established community would be similar under both the proposed project and the Reduced Traffic Noise Alternative.

Under the Reduced Traffic Noise Alternative, development would be concentrated in the ten General Plan Land Use Study Areas and implementation of the Reduced Traffic Noise Alternative would not conflict with any applicable land use plans adopted for the purpose of avoiding or mitigating an environmental effect. The Reduced Traffic Noise Alternative would implement the same new and modified General Plan 2040 goals, policies, or actions, and would involve additional TDM measures to further reduce VMT. Therefore, as under the proposed project, the Reduced Traffic Noise Alternative would achieve a greater level of consistency with the intent of *Plan Bay Area 2050*, which provides a framework for future development in the Bay Area to meet the State's GHG and VMT reduction goals through the concentration of development in downtowns and centers near jobs and services. Therefore, overall land use and planning impacts under the Reduced Traffic Noise Alternative would be *lessened* when compared to the proposed project.

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### 5.6.2.11 NOISE

As described in Chapter 4.11, *Noise*, of this Draft EIR, the proposed project would result in significant and unavoidable project-level and cumulative impacts due to a modeled traffic noise increase of more than 5.0 dBA Ldn over existing conditions along one roadway segment within the EIR Study Area.

Future development allowed under the proposed project would be subject to the standards of the SMMC as well as the new and modified goals, policies, and actions of the proposed General Plan 2040, including those relating to the interface between residential and nonresidential land uses. As specific uses are proposed for particular sites, project-level design, permitting, and/or environmental review would serve to ensure that individual uses would comply with the noise regulations. Future development under the Reduced Traffic Noise Alternative would also be subject to these applicable standards. Construction-related noise and vibration impacts would be similar under both the proposed project and the Reduced Traffic Noise Alternative.

However, unlike the proposed project, the Reduced Traffic Noise Alternative would introduce enhanced TDM requirements applicable to new development as well as existing residences, employees, and businesses. Through the new TDM program, vehicle traffic would be reduced, which in turn would reduce traffic noise. Therefore, impacts would be lessened when compared to the proposed project.

Because the Reduced Traffic Noise Alternative would introduce enhanced TDM requirements to reduce traffic noise, noise impacts under this alternative would be *lessened* when compared to the proposed project.

### 5.6.2.12 PARKS AND RECREATION

As discussed in Chapter 4.12, *Parks and Recreation*, of this Draft EIR, the proposed project would not result in any significant impacts related to parks and recreation, and no mitigation measures are required.

The Reduced Traffic Noise Alternative does not propose any changes that would result in substantial differences from the growth potential of the proposed project and would therefore result in similar demand on the parks and recreation facilities that serve the EIR Study Area. Like the proposed project, potential future development under the No Project Alternative would be required to comply with all existing City regulations adopted to ensure that development either provides parkland or pay in-lieu fees for the City to dedicate parkland elsewhere. Therefore, impacts under the Reduced Traffic Noise Alternative would be *similar* when compared to the proposed project.

### 5.6.2.13 POPULATION AND HOUSING

As described in Chapter 4.13, *Population and Housing*, of this Draft EIR, the proposed project would not result in any significant impacts related to population and housing, and no mitigation measures are required. As described in Chapter 4.13, the proposed project would exceed the projections in *Plan Bay Area 2040* for San Mateo but would generally be in line with county-level projections in *Plan Bay Area 2050*.

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The Reduced Traffic Noise Alternative would involve the same growth potential as would occur under the proposed project. The Reduced Traffic Noise Alternative would include the updated policy framework of the proposed project, which ensures adequate planning occurs to accommodate the future population increase and future development. Therefore, impacts would be similar under both the proposed project and the Reduced Traffic Noise Alternative.

As under the proposed project, implementation of the Reduced Traffic Noise Alternative would result in a net increase in housing; therefore, it would not require replacement housing outside of the EIR Study Area. Therefore, potential impacts associated with displacement under the Reduced Traffic Noise Alternative would be similar when compared to those of the proposed project.

In summary, the Reduced Traffic Noise Alternative would result in the same growth potential as the proposed project and impacts related to population and housing would be *similar* when compared to the proposed project.

### 5.6.2.14 PUBLIC SERVICES

As described in Chapter 4.14, *Public Services*, of this Draft EIR, impacts under the proposed project to public services were found to be less than significant, and no mitigation measures are required.

The Reduced Traffic Noise Alternative would involve the same growth potential as would occur under the proposed project and would therefore result in a similar level of demand on the public service providers that serve the EIR Study Area. Potential future development under the Reduced Traffic Noise Alternative would be required to comply with all existing City regulations adopted to ensure that development pays its fair share of the cost of delivering services and providing libraries, while payment of property taxes would ensure that future development pays its fair share towards schools. Overall, impacts under the Reduced Traffic Noise Alternative would be *similar* to those of the proposed project.

### 5.6.2.15 TRANSPORTATION

As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed project would result in less-than-significant transportation impacts and no mitigation measures are required.

Like the proposed project, the Reduced Traffic Noise Alternative would be subject to the same federal, State, and local City design standards to ensure that future development does not increase hazards due to a geometric design feature or incompatible uses, and that development provides adequate emergency access. Therefore, the Reduced Traffic Noise Alternative would have a similar impact when compared to the proposed project in terms of transportation safety.

Much like the proposed project, the Reduced Traffic Noise Alternative would concentrate development in the ten General Plan Land Use Study Areas, and adopt the same General Plan goals, policies and actions as the proposed project. However, unlike the proposed project, the Reduced Traffic Noise Alternative would introduce enhanced TDM requirements applicable to new development as well as existing residences, employees, and businesses.



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Through the new TDM program, vehicle traffic would be reduced, which in turn would reduce VMT. As a result of implementation, the Reduced Traffic Noise Alternative would result in *lessened* transportation impacts when compared to the proposed project.

### 5.6.2.16 TRIBAL CULTURAL RESOURCES

As described in Chapter 4.16, *Tribal Cultural Resources*, of this Draft EIR, the proposed project would result in less-than-significant impacts to tribal cultural resources and no mitigation measures are required.

The Reduced Traffic Noise Alternative would involve the same growth potential and land use pattern as would occur under the proposed project. As under the proposed project, existing archaeological resources, including Native American artifacts and human remains, present in the EIR Study Area, could be affected by construction activities under the Reduced Traffic Noise Alternative. Like the proposed project, the Reduced Traffic Noise Alternative would be subject to the same federal, State, and local regulations to mitigate impacts to tribal cultural resources, such as those in the Public Resources Code, California Health and Safety Code, and the California Code of Regulations.

The Reduced Traffic Noise Alternative would implement the same new and modified General Plan goals, policies, and actions that require additional considerations to further protect tribal cultural resources in the EIR Study Area as the proposed project. Therefore, the Reduced Traffic Noise Alternative would have *similar* impacts to tribal cultural resources as compared to the proposed project.

### 5.6.2.17 UTILITIES AND SERVICE SYSTEMS

As described in Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, impacts to water, wastewater, solid waste, stormwater, and energy infrastructure under the proposed project were found to be less than significant with the compliance of all applicable regulations. No mitigation measures are required.

Demand and consumption trends generally demonstrate that advances in recycling and solid waste reduction requirements, water-efficient regulations in building and landscaping, and stricter stormwater retention requirements would reduce utility and service systems demands from existing conditions, resulting in a more efficient use of utilities. Because the Reduced Traffic Noise Alternative would involve the same growth potential and land use pattern as would occur under the proposed project, similar utility and service system usage and demand would occur. In addition, the Reduced Traffic Noise Alternative includes the new and modified General Plan 2040 goals, policies, and actions of the proposed project related to utilities to further minimize impacts, including policies to ensure increased coordination with water suppliers and water supply planning efforts. Therefore, impacts under the Reduced Traffic Noise Alternative would be *similar* when compared to the proposed project.

### 5.6.2.18 WILDFIRE

As described in Chapter 4.18, *Wildfire*, of this Draft EIR, the proposed project would result in significant and unavoidable project-level and cumulative impacts due to development under the proposed project

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increasing population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.

The Reduced Traffic Noise Alternative would involve the same growth potential and land use pattern as would occur under the proposed project. Like the proposed project, the Reduced Traffic Noise would implement the same new and modified General Plan goals, actions, and policies that would serve to reduce wildfire impacts. Therefore, the Reduced Traffic Noise Alternative would have *similar* wildfire impacts as the proposed project.

### 5.6.3 RELATIONSHIP OF THE ALTERNATIVES TO THE OBJECTIVES

The Reduced Traffic Noise Alternative would involve the same proposed goals, policies, and actions of the proposed project intended to address the project objectives. In addition, this alternative would include enhanced TDM requirements to reduce vehicle traffic, in turn reducing criteria air pollutants, GHG emissions, and traffic noise. Therefore, the Reduced Traffic Noise Alternative would fully achieve all the project objectives, and would more fully meet the following objectives when compared to the proposed project:

- Protect natural resources, such as water, air, trees, and hillsides, and preserve and improve open spaces, including open space for recreation, for habitat, or for public health and safety.
- Protect residents from harmful or disruptive levels of noise.
- Improve the safety and quality of life for residents of neighborhoods that face a combination of both higher-than-average pollution exposure and social and economic challenges such as low incomes, language barriers, or housing instability (Equity Priority Areas).

## 5.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, Section 15126.6 of the CEQA Guidelines requires that an “environmentally superior” alternative be selected and the reasons for such a selection be disclosed. In general, the environmentally superior alternative is the alternative to the proposed project that would be expected to generate the least number of significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative to the proposed project selected may not be the alternative to the proposed project that best meets the goals or needs of San Mateo. Because CEQA Guidelines Section 15126.6(c) requires an evaluation of a reasonable range of alternatives to the proposed project, the proposed project under consideration cannot be identified as the environmentally superior alternative. Additionally, in accordance with CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

As shown in Table 5-2, *Comparison of Impacts of the Proposed Project and Project Alternatives*, the Reduced Traffic Noise Alternative would, in comparison to the proposed project, result in lessened environmental impacts related to air quality, energy, GHG emissions, land use and planning, noise, and

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transportation, and would not result in greater impacts for any resource categories. Therefore, as shown in Table 5-2, the Reduced Traffic Noise Alternative would be the environmentally superior alternative.

## 6. CEQA-Required Assessment Conclusions

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This chapter provides an overview of the impacts of the proposed project based on the analyses presented in Chapter 4, *Environmental Analysis*, and its subchapters 4.1 through 4.18 of this Draft Environmental Impact Report (EIR). The topics covered in this chapter include impacts found not to be significant, growth-inducing impacts, and significant irreversible changes to the environment. For a more detailed analysis of the proposed project's environmental effects and the proposed mitigation measures to minimize significant impacts, see Chapter 4 and its subchapters 4.1 through 4.18 of this Draft EIR.

### 6.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 15126.2(b) of the California Environmental Quality Act (CEQA) Guidelines requires that “direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short- and long-term effects.” Chapter 1, *Executive Summary*, contains Table 1-1, *Summary of Significant Impacts and Mitigation Measures*, which summarizes the significant impacts, mitigation measures, and levels of significance with and without mitigation. While actions from the proposed project and mitigation measures, where feasible, would reduce the level of impact to less than significant, the following impacts would remain significant and unavoidable after mitigation measures are applied. The identification of these program-level impacts does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level that do not exceed the thresholds of significance. As detailed in Chapters 4.2, *Air Quality*, Chapter 4.8, *Hazards and Hazardous Materials*, Chapter 4.11, *Noise*, Chapter 4.15, *Transportation*, and Chapter 4.18, *Wildfire*, of this Draft EIR, environmental impacts associated with the proposed project were found to be significant and unavoidable, as listed:

#### Air Quality

- **Impact AQ-2:** Construction of development projects that could occur from implementation of the proposed project would generate emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds and cumulatively contribute to the nonattainment designations of the San Francisco Bay Area Air Basin.
- **Impact AQ-3:** Operation of development projects under the proposed project would generate operational emissions that would exceed the Bay Area Air Quality Management District's regional significance thresholds for volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>).
- **Impact AQ-4:** Construction emissions associated with development under the proposed project could expose air quality-sensitive receptors to substantial toxic air contaminant concentrations and exceed the Bay Area Air Quality Management District's project-level and cumulative significance thresholds.

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- **Impact AQ-6:** Implementation of the proposed project would generate a substantial increase in emissions that exceeds the Bay Area Air Quality Management District's significance thresholds and would cumulatively contribute to the nonattainment designations and health risk in the San Francisco Bay Area Air Basin.

### Noise

- **Impact NOISE-1:** Buildout under the proposed project is anticipated to result in unacceptable traffic noise with an increase of more than 5.0 dBA  $L_{dn}$  over existing conditions along one roadway segment (1<sup>st</sup> Avenue west of B Street) within the EIR Study Area.
- **Impact NOISE-6:** Buildout under the proposed project is anticipated to result in unacceptable cumulative traffic noise within the EIR Study Area.

### Wildfire

- **Impact WILD-2:** Development under the proposed project would increase population, buildings, and infrastructure in wildfire-prone areas, thereby exacerbating wildfire risks.
- **Impact WILD-5:** Potential development under the proposed project could, in combination with other surrounding and future projects in the State Responsibility Areas, Very High Fire Hazard Severity Zones, or Wildland Urban Interface, result in cumulative impacts associated with the exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors.

## 6.2 IMPACTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the State CEQA Guidelines states:

An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.

Development of the proposed project would not result in significant environmental impacts to the environmental impact topics listed below and therefore, are not discussed in detail in Chapters 4.1 through 4.18 of this Draft EIR.

### 6.2.1 AGRICULTURE AND FORESTRY RESOURCES

Maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency categorize most land in San Mateo as Urban and Built-Up Land.<sup>1</sup> There are no agricultural lands classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance in the City of San

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<sup>1</sup> California Department of Conservation, 2018, California Important Farmland Finder, <https://maps.conservation.ca.gov/DLRP/CIFF/>, accessed August 9, 2022.

## CEQA-REQUIRED ASSESSMENT CONCLUSIONS

Carlos. There are no lands under a Williamson Act Contract within San Mateo, and there are no agricultural land uses adjoining the EIR Study Area.<sup>2</sup> Therefore, approval and implementation of the proposed project would not conflict with lands under Williamson Act contract. For these reasons, there would be no impacts to agricultural or forestry resources under CEQA, and no mitigation would be required.

### 6.2.2 MINERAL RESOURCES

The California Department of Conservation, Geological Survey classifies lands into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974. These MRZs identify whether known or inferred significant mineral resources are present in areas and are defined as follows:<sup>3</sup>

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it's judged that little likelihood exists for their presence.
- MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.
- MRZ-3: Areas containing mineral deposits the significance of which cannot be evaluated from available data
- MRZ-4: Areas where available information is inadequate for assignment to any other MRZ zone.

According to the California Department of Conservation, State Mining Geology Board, there are no known significant mineral resources within the EIR Study Area. A majority of San Mateo is categorized as MRZ-1, with the exception of the Coyote Point area at the northern tip of the City, which is categorized as MRZ-3.<sup>4</sup> Although further exploration within the EIR Study Area could result in the reclassification of specific localities, no mineral resources have been historically exploited or are being currently exploited commercially within the EIR Study Area. As such, these standards have been screened out from further evaluation. Consequently, there would be no impacts to mineral resources as a result of adoption and implementation of the proposed project.

### 6.3 GROWTH INDUCEMENT

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth-inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or the removal of major barriers to development.

<sup>2</sup> County of San Mateo, 2022, Williamson Act Parcels, <https://data.smcgov.org/Housing-Development/Williamson-Act-Parcels/sq6e-7j5j#revert>, accessed August 9, 2022.

<sup>3</sup> California Department of Conservation, State Mining and Geology Board and Division of Mines and Geology, *Guidelines for Classification and Designation of Mineral Lands*, <https://www.conservation.ca.gov/smgmb/Guidelines/Documents/ClassDesig.pdf>, accessed August 9, 2022.

<sup>4</sup> California Department of Conservation, Stinson, M., Manson, M., and Plappert, J., 1982, *Mineral Land Classification Map, Aggregate Resources Only: San Mateo County*.

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This section evaluates the proposed project's potential to create such growth inducements. As CEQA Guidelines Section 15126.2(d) requires, "[it] must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment." In other words, negative impacts associated with growth inducement occur only where the projected growth would cause significant adverse environmental impacts.

Growth-inducing impacts fall into two general categories: direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Indirect, or secondary growth-inducing impacts consist of growth induced in the region by additional demands for housing, goods, and services associated with the population increase caused by, or attracted to, a new project.

Further, while implementation of the proposed project would induce growth, as discussed in detail in Chapter 4.12, *Population and Housing*, of this Draft EIR, the proposed project would be consistent with the regional planning objectives established for the Bay Area. While the project itself implements goals, policies, and actions to accommodate the project's projected growth, it would exceed the current population and household forecasts as projected by the Association of Bay Area Governments (ABAG). However, ABAG prepares forecasts of the region's population and employment every two to four years. Amongst other sources, ABAG's projections take into account local planning documents for the nine-county region, such as the City of San Mateo's General Plan. As such, while the proposed project exceeds the regional projections, both the General Plan and regional forecasts are long-range planning tools that assist local governments to identify policies that address changing environments. Accordingly, following adoption of the proposed project, the regional forecasts would take into account the new growth potential for San Mateo, thereby bringing the two long-range planning tools into better alignment. Additionally, this additional growth would come incrementally over a period of approximately 20 years and a policy framework is in place to ensure adequate planning occurs to accommodate it. The proposed project results in mixed-use development near transportation facilities and employment centers and implements energy and water conservation requirements related to existing and new development, thereby minimizing consumption of non-renewable resources to the extent practicable.

### 6.3.1 DIRECT IMPACTS

The proposed project is a plan-level document and does not propose any specific development; however, implementation of the proposed project would induce growth by increasing the development potential in the EIR Study Area, as shown in Table 3-1, *Proposed 2040 Buildout Projections in the EIR Study Area*, in Chapter 3, *Project Description*. As shown in Table 3-1, the 2040 forecast for the EIR Study Area is approximately 160,040 total population, 65,180 housing units, 61,140 households, and 79,360 jobs. State law requires the City to promote the production of housing to meet its fair share of the regional housing needs distribution made by ABAG. While the City provides adequate sites to meet its fair-share housing obligations, the additional housing capacity provided by the project would meet the additional demand generated by new job growth. In addition, the proposed General Plan would result in regional benefits by promoting growth that encourages less automobile dependence, which could have associated air quality and greenhouse gas (GHG) benefits. Encouraging infill growth in designated areas would help to reduce development pressures on lands outside the City Limits.



## CEQA-REQUIRED ASSESSMENT CONCLUSIONS

### 6.3.2 INDIRECT IMPACTS

The proposed project could be considered growth inducing because it includes policies and actions that encourage new growth in the urbanized areas of San Mateo. Development in these areas would consist of infill development on underutilized sites, sites that have been previously developed, and that are vacant or have been determined to be suitable for development or redevelopment. However, infrastructure is already in place in these areas and growth would be required to comply with the City's General Plan, zoning regulations, and standards for public services and utilities. Secondary effects associated with this growth do not represent a new significant environmental impact that has not already been addressed in the individual resource chapters of this EIR. Additionally, population and employment growth would occur incrementally over a period of approximately 20 years and would be consistent with the regional planning objectives established for the Bay Area.

## 6.4 SIGNIFICANT AND IRREVERSIBLE CHANGES

Section 15126.2(d) of the CEQA Guidelines requires an EIR to discuss the extent to which the proposed project would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed herein.

### 6.4.1 CHANGES IN LAND USE THAT COMMIT FUTURE GENERATIONS

As described in detail in Chapter 3, *Project Description*, of this Draft EIR, the proposed project generally maintains the land use pattern of the existing General Plan. Potential future development under the proposed project is expected to largely occur in ten General Plan Land Use "Study Areas" that are near transit; contain aging shopping centers; or are areas where property owners have expressed interest in considering redevelopment of the property through the General Plan Update process. However, some potential future development may occur on vacant non-urban sites which are already designated for development. Once future development under the proposed project occurs, it would not be feasible to return the developed land to its existing (pre-project) condition. Therefore, there is potential that some of the development allowed under the proposed project would most likely lead to irreversible changes in land use.

### 6.4.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Irreversible changes to the physical environment could occur from accidental release of hazardous materials associated with development activities; however, compliance with the applicable regulations and proposed General Plan goals, policies, and actions would reduce this potential impact to a less-than-significant level. Therefore, irreversible damage is not expected to result from the adoption and implementation of the proposed project.

## CEQA-REQUIRED ASSESSMENT CONCLUSIONS

### 6.4.3 LARGE COMMITMENT OF NONRENEWABLE RESOURCES

Implementation of development allowed under the proposed project would result in the commitment of limited, renewable resources, such as lumber and water. In addition, development allowed by the proposed project would irretrievably commit nonrenewable resources for the construction of buildings, infrastructure, and roadway improvements. These nonrenewable resources include mined minerals, such as sand, gravel, steel, lead, copper, and other metals. Future buildout under implementation of the proposed project also represents a long-term commitment to the consumption of fossil fuels, natural gas, and gasoline. Increased energy demands would be used for construction, lighting, heating, and cooling of residences, and transportation of people within, to, and from San Mateo. However, as shown in Chapter 4.5, *Energy*, and in Section 4.17.1, *Water*, and Section 4.17.3, *Solid Waste*, of Chapter 4.17, *Utilities and Service Systems*, of this Draft EIR, several regulatory measures and proposed General Plan goals, policies, and actions encourage energy and water conservation, alternative energy use, waste reduction, alternatives to automotive transportation, and green building. Future development under the proposed project would be required to comply with all applicable building and design requirements, including those set forth in Title 24 relating to energy conservation. In compliance with CALGreen, the State's Green Building Standards Code, future development would be required to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. Therefore, while the construction and operation of future development would involve the use of nonrenewable resources, compliance with applicable standards and regulations and implementation of proposed General Plan goals, policies, and actions, and the continuation of the City's Climate Action Plan strategies that would not be substantively changed by the proposed Climate Action Plan update, would reduce the use of nonrenewable resources to the maximum extent practicable. Therefore, the proposed project would not represent a large commitment of nonrenewable resources in comparison to a business-as-usual situation.

## 7. Organizations and Persons Consulted

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This Draft Environmental Impact Report (EIR) was prepared by the contributors listed herein and includes content and information provided by individuals with the lead agency, other agencies, service providers, consultants, and other contributors.

### 7.1 LEAD AGENCY

#### City of San Mateo

The City of San Mateo had numerous other staff that provided input or supported those specifically listed.

Zachary Dahl .....	Deputy Community Development Director
Joanne Magrini .....	Parks and Recreation Director
Azalea Mitch .....	Director of Public Works
Manira Sandhir.....	Planning Manager and Zoning Administrator
Tricia Toomey .....	Police Department Business Manager
James Moore and Rukshana Singh .....	City Librarian
Bethany Lopez.....	Senior Engineer
Somer Smith .....	Associate Planner

### 7.2 PERSONS CONSULTED

#### San Mateo Consolidated Fire Department

Melinda Martin .....	Deputy Fire Marshal
Robert Marshall.....	Deputy Fire Chief & Fire Marshal
Jim Yoke.....	Emergency Services Manager

#### San Mateo Union High School District

Christina Wudijono .....	Executive Coordinator to the Associate Superintendent Chief Business Officer
--------------------------	--

#### Cal Water, Mid-Peninsula District

Scott Wagner.....	Director of Distribution & Operations Engineering
Michael Bolzowski.....	Senior Engineer

## ORGANIZATIONS AND PERSONS CONSULTED

### City of Foster City

Sofia Mangalam ..... Community Development Director  
Ray Towne ..... Director of Public Works  
Thai-Chau Le..... Planning Manager

### EMID/Maddeus Water Management

Michelle Maddeus ..... President, Senior Engineer  
Tess Kretschmann..... Staff Engineer

### Native American Heritage Commission

Cody Campagne ..... Cultural Resources Analyst

### Native American Tribes

Kanyon Sayers-Roods ..... Indian Canyon Band of Costanoan Ohlone People

## 7.3 CONSULTANTS

### PlaceWorks: Environmental Prime Consultant

Joanna Jansen ..... Principal, Principal-In-Charge  
Carey Stone ..... Senior Associate II, General Plan Project Manager  
Alexis Mena ..... Senior Associate II, EIR Project Manager  
Vivian Kha..... Associate, Primary EIR Author  
Madeline Miller ..... Project Planner, EIR Author  
Nicole Vermillion ..... Principal, Air Quality, Energy, and Greenhouse Gas Emissions  
Cathy Fitzgerald ..... Principal Engineer; Hydrology, Water Quality, and Utilities  
Lance Park ..... Senior Associate; Air Quality, Energy, and Greenhouse Gas Emissions  
Mike Watson ..... Senior Geologist; Geology, Hazards, and Hazardous Materials  
Emily Parks ..... Associate; Air Quality, Energy, and Greenhouse Gas Emissions  
Jacqueline Protsman Rohr ..... Associate, EIR Author  
Grant Reddy ..... Graphics Designer, Graphics

### ECORP Consulting, Inc: Noise

Seth Myers ..... Noise Task Manager  
Will Duvall ..... Traffic Noise Contours

### Kittelson and Associates, Inc: Transportation

Damian Stefanakis..... Senior Principal Planner

ORGANIZATIONS AND PERSONS CONSULTED

Anusha Musunuru.....Senior Engineering Associate  
Dhawal Kataria ..... Planner

Forget Me Not History: Cultural Resources

Erica Schultz ..... Principal

## ORGANIZATIONS AND PERSONS CONSULTED

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A P P E N D I X   A

NOTICE OF PREPARATION (NOP)  
AND COMMENTS ON THE NOP





## APPENDIX A1: NOTICE OF PREPARATION





## **Notice of Preparation Environmental Impact Report City of San Mateo**

Date: January 12, 2022

To:	State Clearinghouse	From:	Zachary Dahl, Deputy Director
	State Responsible Agencies		Community Development Department
	State Trustee Agencies		City of San Mateo
	Other Public Agencies		330 West 20 <sup>th</sup> Avenue
	Interested Organizations		San Mateo, CA 94403

Subject: Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR)  
Lead Agency: City of San Mateo Community Development Department  
Project Title: San Mateo General Plan Update

Notice is hereby given that the City of San Mateo (City) will prepare an EIR for the San Mateo General Plan Update (proposed project). Pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15206, the proposed project is considered a project of statewide, regional, or areawide significance. The City, acting as the Lead Agency, will prepare an EIR to address the potential environmental impacts associated with the project at a programmatic level consistent with CEQA Guidelines Section 15168. The program-level EIR will evaluate the environmental impacts associated with the broad policies of the General Plan Update and the likely type and amount of development allowed within the General Plan horizon of 2040. This EIR will not evaluate detailed, site-specific projects under the General Plan. An evaluation of project alternatives that could reduce significant impacts will be included in the EIR. The proposed project, its location, and potential environmental effects are described below. Additional information on the General Plan Update is available at [www.StriveSanMateo.org](http://www.StriveSanMateo.org).

Members of the public and public agencies are invited to provide comments in writing as to the scope and content of the EIR. The City needs to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but no later than the close of the 30-day Notice of Preparation (NOP) review period on Friday, February 11, 2022. If you submit comments on the scope of the EIR, you will automatically be added to the City's distribution list for future notices and information about the environmental review process for proposed project. If you do not wish to submit comments on the scope of the EIR, but would like to be added to the City's mailing list, you can submit your contact information, including email address with a request to be added to the mailing list.

Please send your written comments to Zachary Dahl, Deputy Director of Community Development, at the address shown above or email to [zdahl@cityofsanmateo.org](mailto:zdahl@cityofsanmateo.org) with "General Plan Update EIR" as the subject. Public agencies providing comments are asked to include a contact person for the agency.

1. Project Location:

San Mateo is located in the San Francisco Bay Area in Northern California. It is bordered by the San Francisco Bay and City of Foster City to the east, the City of Burlingame and Town of Hillsborough to the north, the City of Belmont to the south, and the Town of Hillsborough and unincorporated San Mateo County to the west. Major interstates and State routes include Highway 101 and California State Routes 92 and 82. Figure 1 shows the regional setting of the City of San Mateo and the EIR Study Area.

2. Lead Agency Contact:

Zachary Dahl, Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20th Avenue  
San Mateo, CA 94403  
(650) 522-7207  
[zdahl@cityofsanmateo.org](mailto:zdahl@cityofsanmateo.org)

3. Project Sponsor:

City of San Mateo

4. Project Description:

The City of San Mateo is preparing comprehensive updates to its existing General Plan. The update is expected to be completed in 2023 and will guide the City's development and conservation through 2040.

State law requires that the General Plan contain eight elements: Land Use, Circulation, Housing, Open Space, Noise, Safety, Conservation, and Environmental Justice. The content of these elements is outlined in State law. The General Plan Update will include revisions to the policies and land use map of the existing General Plan. The updated General Plan will include all State-required elements, and an optional element, Urban Design.

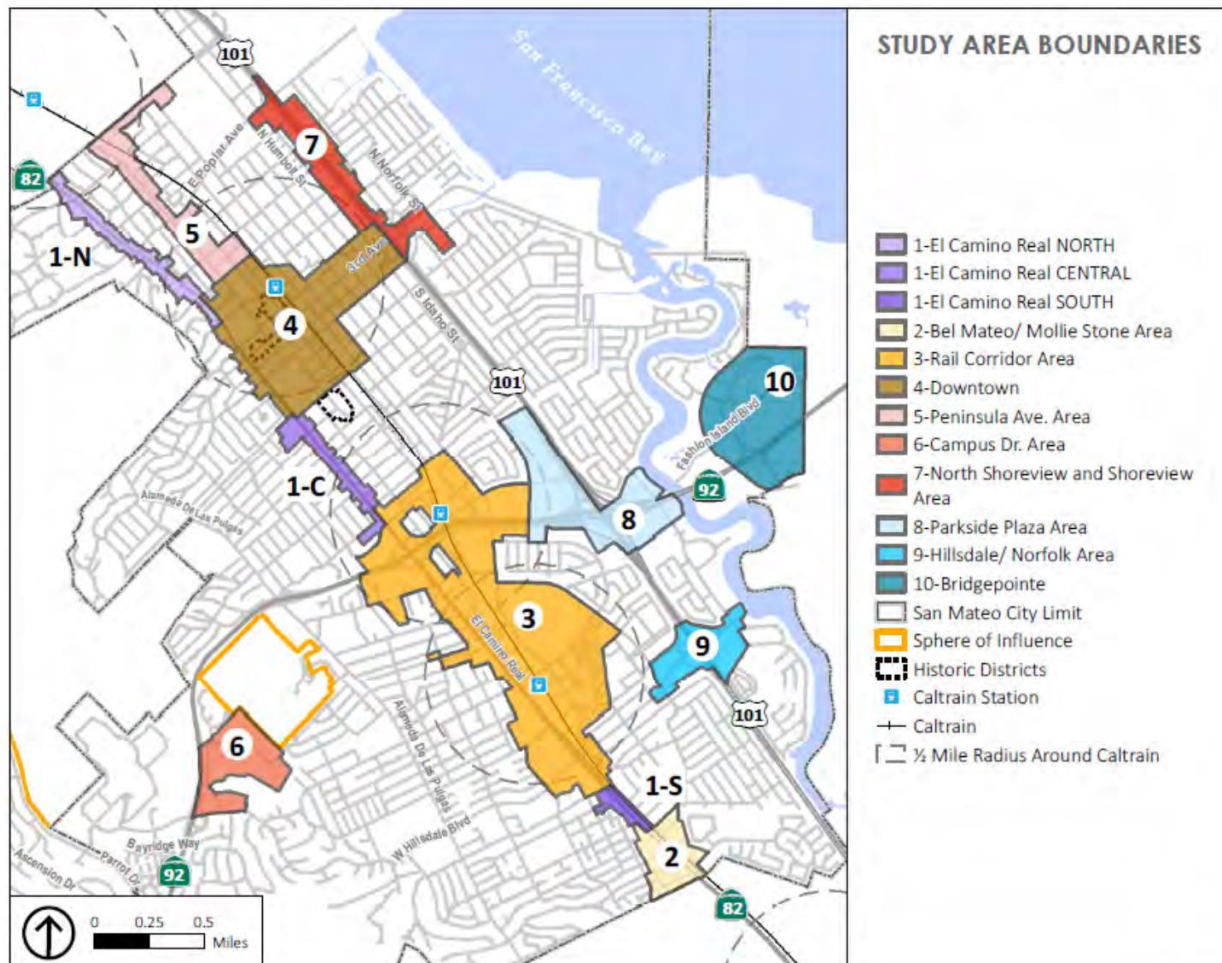
The overall purpose of the General Plan Update is to create a policy framework that articulates a vision for the city's long-term physical form and development, while preserving and enhancing the quality of life for San Mateo residents. The key components of this project will include broad community goals for the future of the City of San Mateo and specific policies and implementing actions that will help meet the goals. The General Plan Update will add new and expanded policy topics to address the current requirements of State law, modernize the City's policy framework, and address land use mapping issues and inconsistencies. To achieve the General Plan vision, the City has analyzed three alternatives for ten Study Areas that were developed through an extensive public process. The Study Areas include areas near transit; areas where current buildings are aging, vacant, or not maintained; or areas where property owners have expressed interest in considering redevelopment of the property. The Study Areas are the locations where the majority of growth is projected to occur; however, changes could still occur outside of these areas. Figure 2 shows the Study Areas.

FIGURE 1: PROJECT LOCATION & STUDY AREA



Source data: City of San Mateo, 2019; San Mateo County, 2018; Esri, 2019; PlaceWorks, 2019.

FIGURE 2: TEN STUDY AREAS





## 5. Potential Environmental Impacts of the Project

The EIR for the proposed project will address the range of impacts that could result from adoption and implementation of the General Plan. Below is a list of environmental topics that will be examined in the EIR.

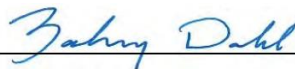
- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and System Services
- Wildfire

## 6. Public Meetings and Workshops

The City will hold many public workshops and meetings throughout the planning process, as well as several meetings of the General Plan Subcommittee, Planning Commission, and City Council, to inform the public and interested agencies about the proposed project and solicit feedback on the contents of the proposed General Plan Update. Details for each meeting will be made available on the City website and the project website at [www.StriveSanMateo.org](http://www.StriveSanMateo.org).

The City will also hold a scoping meeting to solicit public comment on the environmental issues to be addressed in the EIR. The scoping meeting will be held on as part of the scheduled Planning Commission meeting on Tuesday, January 25, 2022, at 7:00 p.m. Due to the State of California's Declaration of Emergency and Shelter in Place Order, all City Council and Commission meetings will be held remotely. In-person attendance is not an option. The public can attend the scoping meeting and provide comment virtually using the instructions included in the agenda and provided on the City's website at <https://www.cityofsanmateo.org/3971/Agendas-Minutes-Public-Meeting-Portal>.

Date: January 10, 2022

Signature: 

Title: Deputy Director

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## APPENDIX A2: COMMENTS ON THE NOP



January 17, 2022

Zachary Dahl, Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20th Ave.  
San Mateo, CA 94403

**Subject:** Notice of Preparation (NOP) of Draft Environmental Impact Report (EIR)

**Lead Agency:** City of San Mateo Community Development Department

**Project Title:** San Mateo General Plan Update

Dear Mr. Dahl:

I am encouraged to see that cultural resources are among the environmental topics that will be examined in the EIR. As you know, cultural resources include historic resources, defined in the CEQA Guidelines as the built environment, including buildings, structures, districts, and landscapes generally at least 50 years old.

The first step in determining a project's impact on cultural resources is to identify whether or not cultural resources are present. In the same way that a site inventory of land suitable for residential development is indispensable to an analysis of San Mateo's development capacity within the General Plan 2040 planning horizon, an inventory of cultural resources is necessary to determine if, and to what extent projected growth will adversely effect historic and cultural resources. Without critical data on the number and location of existing cultural resources, an adequate evaluation of the impacts becomes impossible.

San Mateo's General Plan 2040 anticipates that in the next twenty years San Mateo will undergo an almost unprecedented level of population, jobs and housing growth. Even the least disruptive of the three alternative scenarios contemplated will increase population by 30%, jobs by 20% and housing by 27%. The most aggressive alternative calls for population and housing growth exceeding 50% of 2020 levels. The impacts of this growth will be felt city-wide, effecting every neighborhood in every corner of the city in residential and commercial districts alike.

Therefore, I respectfully request that the City conduct a reconnaissance-level cultural resource survey concurrently and in tandem with the General Plan EIR to ensure potential adverse impacts to cultural resources are adequately evaluated. A reconnaissance-level survey is a first step in the survey process that identifies those areas and properties worthy of further study. Reconnaissance surveys establish broad historic and architectural contexts necessary for understanding our community history. Like the program-level EIR itself, a reconnaissance-level cultural resource survey provides an opportunity to consider broad policy alternatives and program-wide mitigation measures and provides greater flexibility to address cumulative impacts on a comprehensive basis.

Sincerely,  
Keith Weber  
San Mateo

Dear Mr. Dahl,

I gave a copy of the Historic Resources Evaluation Report for 1007 East 5th Avenue San Mateo dated October 2018, to Julia Klein, Principal Planner and the GP sub-committee when we began the General Plan review. This historical evaluation report was prepared by Denise Bradley, Landscape Historian and Ward Hill, Architectural Historian. It qualifies as a both as a historical resource and unique archaeological resources.

In reviewing the maps of Area 4 - Downtown, we did not see a historical marker for our home, hill and pond Japanese Garden, Katsura building, walkway, and a second Japanese Garden on your map. Our property is located on 5th Avenue, S. Humboldt, and 4th Avenue. Perhaps I missed it?

Please include our property in your GP EIR scoping and provide mitigation if there are adverse environmental impacts. In the past, the City did a separate EIR for it's inclusion in the 3rd Avenue Interchange Improvement Project. Our Historic Resources Evaluation was included in the 101 Managed Lane Project EIR, and it will be included in the Peninsula/101 Interchange Project EIR.

Also, when the San Mateo Historic Building Survey 1989 gets funded and updated, we would like to see more of the historic styled bungalows in the East San Mateo / Central Neighborhood included which look like the illustrations in the survey. It seems like the bar was set very high for inclusion to the survey. We would like to preserve and protect more of our special Craftsmen, Spanish Colonial Revival, Eastern Shingle Cottages, and Tudor Revival homes which represent the neighborhood character of the east side of San Mateo.

Thank you.

Laurie Watanuki  
1007 East 5th Avenue  
San Mateo, CA 94402

To All: this is a follow up and expansion of my stated comments about the Environmental Impact Report scoping meeting at the January 25, 2022 planning commission meeting.

1. Sea level rise needs to be included as one of the potential environmental impacts to the project. With large swaths of the city currently exposed to sea level rise and storm surges, a focus needs to be placed on protecting and conserving the existing built environment and any new development in these common areas.
2. The amount of private property and critical infrastructure, all of which is documented in studies by San Mateo County flood assessment studies, clearly demands that the city needs to include sea level rise as a highly important component of the EIR. The city of San Mateo has intimate information of the county's studies thru its participation not only of staff time yet also with council members as part of the studies as board members.
3. Additionally, and potentially more harmful to the city, is the effect of Shallow Groundwater Rise due to sea level rise. A study is being conducted for the County of San Mateo by the San Francisco Estuary Institute & The Aquatic Science Center which will map shallow ground water tables to clearly identify and quantify what if any effects this issue will have on San Mateo. This study is tentatively planned to be out in the summer of 2022. This resource should be used in the general plan updates CEQA document.
4. The city of San Mateo assembled their own PWWF analysis for the Clean Water Program identifying a PWWF of 98 million gallons in a 24 hour period every five years starting in 2035. This is another study that should be used to determine how sea level rise, storm surges, shallow groundwater rise and on land flooding will affect current and expected growth in areas exposed to these impacts.

Thanks

John Ebnetter

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Hello Mr. Dahl,

I have been a San Mateo resident since 1983, and have never lived in any other place feeling more like home to me. Even after all these years, I marvel at the beautiful history our town has in its architecture - not only downtown, but in the surrounding neighborhoods.

Our home in Baywood is 86 years old, and we are the second owners. I was lucky enough to hear first-hand from the original owner the loving planning of this home - securing an architect from Louisiana, where he was born, to planning, and then building, a custom home for him and his family. At the time of the sale to me and my first husband in 1995, his daughter gave me a newspaper article about quality home construction in San Mateo, and our house was pictured as an example. With respect to their story of our beautiful home, my husband Dave and I have been careful in updating the home to preserve its history for San Mateo. And we are not alone: there are hundreds of others throughout San Mateo doing the same, as we all know the value of preserving our history, whether it be downtown, San Mateo Park, Hayward Park, Aragon, Baywood, or any neighborhood with historic architecture that helps tell San Mateo's story.

As a City, we have already dropped the ball once on not following through to clearly define and protect historic neighborhoods, please let's not do that again. Let's continue where the 1989 plan stopped and expedite to ensure our rich history and personality doesn't get erased in future planning.

What we'd like to see is clear direction in the Draft EIR for the General Plan, including:

1. The City must first fully identify its Historic Districts, using the 1989 Downtown Historic Study as a starting point.
2. Once the Historic Districts are identified, policies must be created and put in place to articulate how to identify, evaluate, protect, and preserve San Mateo's Historic Districts.
3. The above (1 and 2) MUST be completed before any increased housing plan via the General Plan is considered for San Mateo.

We think of this as "First Things First" by taking a full inventory of what is important for San Mateo to preserve, then future growth can be planned outside the Historic Districts. If we don't do this, we risk losing what makes San Mateo so special. I hope you will agree.

Thank you,

Connie Weiss and Dave Cohen  
460 Fairfax Avenue  
650-303-0402

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have received this message in error, please notify the original sender immediately by telephone or by return e-mail and delete this message along with any attachments from your computer. Thank you.

Deputy Director Dahl:

I am the owner and resident of 421 Parrott Drive and I understand that the City of San Mateo is preparing an environment impact report in support of the long-term general plan. While growth is usually an important driver of a city's general plan, I would support consideration of growth as one of the city's objectives only if preservation of historic and intrinsically beautiful areas of the city are identified as the City's top priority. In support of this objective, I urge the City to conduct an exhaustive historic survey of San Mateo and implement policies to preserve and protect our historic neighborhoods.

Regards,

Larry Garnick  
421 Parrott Drive  
650-867-6175

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Mr. Dahl-

I am excited the City is working on a new General Plan, as I believe we are at a critical time in our great City's development.

Of course there is a huge need to determine the growth and direction of our retail, office and housing base while being realistic about the potential to achieve any set goals, including the timing to affect any changes and the social and economic cost to do so.

Change and growth is both necessary and almost certain to happen no matter what we do, so guiding that change and growth is critical to ensure it happens in a manner that benefits our populace including considerations for traffic, parking, pollution, crime, and aesthetics.

I was born at Peninsula Hospital and grew up in San Mateo until I was 9 years old, then moved to Hillsborough. Since 1996 I have lived back here in San Mateo and love all it has to offer including the downtown retail (which has great potential), proximity to the freeways, schools, library, parks, and housing base.

We live in a 1928 vintage Spanish Mediterranean home which has been modernized over the years, yet retains the original Spanish tile façade accents, interior and exterior wrought iron details, arches, Spanish tile roof, tile courtyard, and many other irreplicable features that come with these historic homes.

As you know there are many historic districts in San Mateo, including Baywood, Aragon, San Mateo Park, Glazenwood, Hayward Park, and North Central.

Unfortunately, many districts have not been formally recognized by the City, though my understanding is they were identified in the 1989 Downtown historic study and have been recognized by the State Office of Historic Preservation.

Without this recognition I and many of my neighbors are concerned we will lose a great deal of this historic base and charm that makes San Mateo a wonderful place to live.

If residents and developers can entirely tear down or materially demolish/renovate these architectural masterpieces they will do so, and we will no longer have a city filled with these gems.

I believe the City must identify and protect these historic districts and resources by identifying policies that allow for the identification, evaluation and protection of these structures and that these actions must be considered in the Draft EIR for the General Plan.

Simply increasing the housing base without these considerations will clearly have an adverse effect on our historic resources and districts throughout the great city of San Mateo.

Thank you for your time and attention on this enormous task that clearly will shape our wonderful City for the next century.

Roger

**Roger Oser**

2950 S. Delaware Street, Suite 125  
San Mateo, CA 94403  
t 650-358-5262  
m 408-472-6888  
[Roger.Oser@nmrk.com](mailto:Roger.Oser@nmrk.com)

[nmrk.com](http://nmrk.com)  
[LinkedIn](#) [Twitter](#) [Facebook](#) [Instagram](#)

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notified that any dissemination or copying of this message or any attachment is strictly prohibited. If you have received this message in error, please notify the original sender immediately by telephone or by return e-mail and delete this message along with any attachments from your computer. Thank you.

**Dear Mr Zachary Dahl,  
Director of San Mateo Community Development**

**This letter is my plea for the City of San Mateo to take a good hard look at what is going happen to San Mateo with the passage of the ABAG regional housing quota mandates, ADUs, SB9 and 10 to our historic districts in San Mateo.**

**There are many historic districts like Baywood, Aragon, Hayward Park, North Central etc. which have been recognized as such including the parts of the downtown. Many of these structures were built in the early 1900's and most before 1940 (I even helped put together a historic walking guide to Downtown San Mateo when I was a Downtown Ambassador working for the city) These districts represent the character and history of San Mateo with many streets named after the original inhabitants/founders of San Mateo. Do we want to tear down that history or preserve it? It sets San Mateo apart as a community with its own unique identity. Most of us are proud of that.**

**These historic housing areas were built with a particular style and charm that cannot be replaced. With the state legislation recently passed, the developers are going to run wild and put up many large multiunit buildings which will dominate neighborhoods with the highest profit motive, irrespective of the impact on the surrounding neighborhood. They will ruin the historic character/history of these neighborhoods along with inadequate onsite parking. It will become a real unsightly and less livable urban mess.**

**The city must identify historic resources, districts and policies that allow for protection of these districts. These actions must be considered in the Draft EIR for the General Plan. I really do not think these policies will compromise the continued availability of housing in San Mateo with good urban planning and efficient use of lots of space that is or will become available.**

**Thank you for taking the time to listen**

**Best Regards**

**Gary Isoardi  
San Mateo**



**We need you to send comments to Zachary Dahl, Deputy Director of Community Development ([zdahl@cityofsanmateo.org](mailto:zdahl@cityofsanmateo.org)) about the need to identify and protect historic resources in San Mateo!**

Your comments are critical because the City Council is prioritizing more housing rather than protecting historic resources. Here are some key points you can make:

- There are many historic districts in San Mateo, including Baywood, Aragon, San Mateo Park, Glazenwood, Hayward Park, North Central, etc. Many districts have not been formally recognized by the City, even though they were identified in the 1989 Downtown historic study and recognized by the State Office of Historic Preservation.
- Increasing housing will have an adverse effect on historic resources and districts throughout San Mateo.
- The City must identify historic resources and districts.
- The City should identify policies that allow for the identification, evaluation, and protection of historic districts.
- These actions must be considered in the Draft EIR for the General Plan.

The City does not really give much weight to form letters so please add your words, even it is to just say:

**Please conduct the historic survey of San Mateo and develop policies to protect our historic neighborhoods.**

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Dear Mr. Dahl,

I am writing in favor of the city recognizing historic neighborhoods and protecting the architectural character of those neighborhoods. The current trend of turning every remodel into a mid-century modern does not fit with the character of many of our neighborhoods which were developed before that time period. I have lived in two different neighborhoods in the city Hayward Park, with homes mostly from the 20's and Baywood with homes mostly from the 30's and 40's. I always thought that the few ranch style homes in Baywood stuck out like sore thumbs and the occasional modern home in Hayward Park also looked very out of place. Now there are Mid century Moderns popping up which would look okay in our Eichler style neighborhoods like the Highlands and Shoreview but not in many of the other areas. The reason we bought in Hayward Park and in Baywood was because of the older styles of homes. We would like the neighborhoods to retain their original feel.

Thank you,

Jean Garcia

[jeanbeangarcia@yahoo.com](mailto:jeanbeangarcia@yahoo.com)

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Hi Mr. Dahl,

I'm a resident of Baywood in San Mateo. I have owned the same home, 365 Fairfax Avenue, for 35 years. We moved into this house, because of the charm of this neighborhood: the unique architecture and the meticulous care each home receives. The historic status of these homes (my home, for instance, is nearly 100 years old), like the Victorians in the city, make our neighborhood quite special. Daily I walk my dog through our neighborhood and often I come across people from other neighborhoods who have come here to walk and enjoy the beauty.

Needless to say, I am writing to support identifying and evaluating our San Mateo historic resources and districts (conducting an historic survey of San Mateo) and developing policies to protect these homes as treasures, like we do National Parks. Hundred year old uniquely-built homes are precious.

Please include these actions in the Draft EIR for the General Plan.

Thank you for considering my request,  
Teresa Rose Becker  
365 Fairfax Ave  
San Mateo, 94402

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DISTRICT 4

OFFICE OF TRANSIT AND COMMUNITY PLANNING

P.O. BOX 23660, MS-10D | OAKLAND, CA 94623-0660

[www.dot.ca.gov](http://www.dot.ca.gov)

February 8, 2022

SCH #: 2022010160

GTS #: 04-SM-2022-00413

GTS ID: 25265

Co/Rt/Pm: SM/82/11.69

Zachary Dahl, Director  
Community Development Department  
City of San Mateo  
330 West 20<sup>th</sup> Avenue  
San Mateo, CA 94403

Re: San Mateo General Plan Update Notice of Preparation (NOP)

Dear Zachary Dahl:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the San Mateo General Plan Update Project. We are committed to ensuring that impacts to the State's multimodal transportation system and to our natural environment are identified and mitigated to support a safe, sustainable, integrated and efficient transportation system. The following comments are based on our review of the January 2022 NOP.

#### Project Understanding

The project includes the preparation of the City of San Mateo General Plan Update. The update will guide the City's development and conservation through 2040. The update will add new and expanded policy topics to address the current requirements of State law, modernize the City's policy framework, and address land use mapping issues and inconsistencies. The project encompasses the entire City and is located along segments of State Route (SR)-82 (El Camino Real), SR-92, and United States Route (US)-101.

#### Travel Demand Analysis

With the enactment of Senate Bill (SB) 743, Caltrans is focused on maximizing efficient development patterns, innovative travel demand reduction strategies, and multimodal improvements. For more information on how Caltrans assesses Transportation Impact Studies, please review Caltrans' Transportation Impact Study Guide ([link](#)).

Zachary Dahl, Director

February 8, 2022

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If projects within the General Plan area meet the screening criteria established in the City's adopted Vehicle Miles Traveled (VMT) policy to be presumed to have a less-than-significant VMT impact and exempt from detailed VMT analysis, please provide justification to support the exempt status in align with the City's VMT policy. Projects

that do not meet the screening criteria should include a detailed VMT analysis in the Draft Environmental Impact Report (DEIR), which should include the following:

- VMT analysis pursuant to the City's guidelines. Projects that result in automobile VMT per capita above the threshold of significance for existing (i.e. baseline) city-wide or regional values for similar land use types may indicate a significant impact. If necessary, mitigation for increasing VMT should be identified. Mitigation should support the use of transit and active transportation modes. Potential mitigation measures that include the requirements of other agencies such as Caltrans are fully enforceable through permit conditions, agreements, or other legally-binding instruments under the control of the City.
- A schematic illustration of walking, biking and auto conditions at the project site and study area roadways. Potential traffic safety issues to the State Transportation Network (STN) may be assessed by Caltrans via the Interim Safety Guidance.
- The project's primary and secondary effects on pedestrians, bicycles, travelers with disabilities and transit performance should be evaluated, including countermeasures and trade-offs resulting from mitigating VMT increases. Access to pedestrians, bicycle, and transit facilities must be maintained.

In addition, any improvements within the Caltrans' Right-of-Way (ROW) must follow Caltrans' process, policy, and design requirements. Any additional or re-zoning of improvements adjacent to Caltrans' ROW, including SR-82, SR-92, US-101, should include be included in the travel demand analysis with possible mitigation.

#### Mitigation Strategies

Location efficiency factors, including community design and regional accessibility, influence a project's impact on the environment. Using Caltrans' Smart Mobility 2010: A Call to Action for the New Decade, the proposed project site is identified as a Close-In Compact Community where community design is moderate and regional accessibility is strong.

Given the place, type and size of the project, the DEIR should include a robust Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions from future development in this area. The measures listed below have been quantified by California Air Pollution Control Officers Association (CAPCOA) and shown to have different efficiencies reducing regional VMT:

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Zachary Dahl, Director

February 8, 2022

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- Addition/ Increase in number of affordable housing units in project;
- Orientation of projects towards non-auto corridor;
- Location of projects near bicycle network;

- Incorporation of bicycle lanes in street design;
- Pedestrian network improvements;
- Traffic calming measures;
- Implementation of a neighborhood electric vehicle (EV) networks, including designated parking spaces for EVs;
- Limiting parking supply;
- Unbundled parking;
- Implementation of Urban Non-Motorized Zone(s);
- Market price public parking;
- Ridesharing programs, Commute Trip Reduction programs, bike sharing programs;
- Transit and trip planning resources such as commute information kiosks;
- Real-time transit information system;
- Transit access supporting infrastructure (including bus shelter improvements and sidewalk/ crosswalk safety facilities);
- VMT Banking and/or Exchange program; and
- Bike parking near transit facilities.

Using a combination of strategies appropriate to this location can reduce VMT, along with related impacts on the environment and State facilities. TDM programs should be documented with annual monitoring reports by a TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take in order to achieve those targets.

Please reach out to Caltrans for further information about TDM measures and a toolbox for implementing these measures in land use projects. Additionally, Federal Highway Administration's Integrating Demand Management into the Transportation Planning Process: A Desk Reference (Chapter 8). The reference is available online at: <http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf>.

#### Transportation Impact Fees

We encourage a sufficient allocation of fair share contributions toward multimodal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT. Caltrans welcomes the opportunity to work with the City and local partners to secure the funding for needed mitigation. Traffic mitigation- or cooperative agreements are examples of such measures.

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Zachary Dahl, Director

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Please identify in text and graphics existing and proposed improvements for the pedestrian, bicycle, and transit networks. The City should estimate the cost of needed improvements, expansion, and maintenance for the Plan area, as well as identify

viable sources of funding, correlated with the pace of improvements, and a scheduled plan for implementation along with the DEIR.

#### Lead Agency

As the Lead Agency, the City of San Mateo is responsible for all project mitigation, including any needed improvements to the State Transportation Network (STN). The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

#### Equitable Access

If any Caltrans facilities are impacted by projects with the General Plan area, those facilities must meet American Disabilities Act (ADA) Standards after project completion. As well, the project must maintain bicycle and pedestrian access during construction. These access considerations support Caltrans' equity mission to provide a safe, sustainable, and equitable transportation network for all users.

#### Encroachment Permit

Please be advised that any permanent work or temporary traffic control that encroaches onto Caltrans' ROW requires a Caltrans-issued encroachment permit. As part of the encroachment permit submittal process, you may be asked by the Office of Encroachment Permits to submit a completed encroachment permit application package, digital set of plans clearly delineating Caltrans' ROW, digital copy of signed, dated and stamped (include stamp expiration date) traffic control plans, this comment letter, your response to the comment letter, and where applicable, the following items: new or amended Maintenance Agreement (MA), approved Design Standard Decision Document (DSDD), approved encroachment exception request, and/or airspace lease agreement. Your application package may be emailed to [D4Permits@dot.ca.gov](mailto:D4Permits@dot.ca.gov).

Please note that Caltrans is in the process of implementing an online, automated, and milestone-based Caltrans Encroachment Permit System (CEPS) to replace the current permit application submittal process with a fully electronic system, including online payments. The new system is expected to be available during 2022. To obtain information about the most current encroachment permit process and to download the permit application, please visit <https://dot.ca.gov/programs/traffic-operations/ep/applications>.

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Zachary Dahl, Director

February 8, 2022

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"Provide a safe and reliable transportation network that serves all people and respects the environment"

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, or for future notifications and requests for review of new projects, please email [LDR-D4@dot.ca.gov](mailto:LDR-D4@dot.ca.gov).

Sincerely,

MARK LEONG



District Branch Chief  
Local Development Review  
c: State Clearinghouse

Mr. Dahl,

I am a 50 year resident of Fairfax Avenue and I am writing to encourage the city to designate Baywood as an historic district so that the character of the neighborhood can be preserved.

Thank you.

Jeanne Bosschart

350 Fairfax Avenue

Sent from my iPad

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**Laurie and Randy Hietter**  
223 Irving Street San Mateo, CA 94402  
lauriehietter@gmail.com

February 8, 2022

Mr. Zachary Dahl, Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20<sup>th</sup> Avenue  
San Mateo, California 94403

Dear Mr. Dahl:

We are pleased to participate in the City of San Mateo General Plan Update Environmental Impact Report (EIR) process, as requested in the Notice of Preparation (NOP) for the EIR. Please accept the following comments on specific issues to include and address in the scope and content of the General Plan Update and EIR.

## HISTORIC RESOURCES

San Mateo and its charming neighborhoods built in the 1920s and 1930s have been a draw for our family since we were children living in Redwood City. No trip to Hillsdale was complete without a cruise up Parrott Drive to admire the classic architecture and beautiful gardens of Baywood Park, as the subdivision was named in 1927. Our visitors never fail to admire the great architecture and gardens of Baywood, and other historic neighborhoods in the city.

There are currently five homes proposed for demolition in Baywood. The demolition and proposed new homes that do not respect the historic nature of the neighborhood is alarming to me and my neighbors who value our neighborhood.

San Mateo has not addressed historic districts in San Mateo since 1989 even though National Register of Historic Places-eligible historic districts were identified during the 1989 *Historic Building Survey Final Report*. Historic resources are an important issue for the General Plan Update and EIR.

### Historic Background and Existing Conditions

The 2018 *San Mateo Existing Conditions Report Parks, Recreation, and Cultural Resources* report does not adequately describe existing historic resources and districts. The report does not recognize or identify the many historic districts in San Mateo that were described in the 1989 *Downtown Historic Building Survey Final Report* and called out by the California State Office of Historic Preservation (OHP) in their 1990 letter commenting on the report.

The 1989 *Historic Building Survey Final Report* states the area west of El Camino:

“Many neighborhoods were well established and exhibited a fine range of historically important architectural styles. San Mateo Park, Baywood Knolls, and parts of Aragon in particular have a rich assortment of architectural styles dating from 1900 to 1939. San Mateo Park, Baywood Knolls, and parts of Aragon in particular have a rich assortment of architectural styles dating from 1900 to 1939.

Early in the survey process, it became apparent that the most sensible approach to surveying these areas was to document various neighborhoods as historic districts (using the same methods applied in Hayward Park's Glazenwood). While this process is simpler than documenting single properties, the task of surveying over 2,000 buildings (the combined number in these areas), proved beyond the scope of this one year project. Although zoning remains primarily R-1 west of El Camino Real, dramatic changes to historically intact neighborhoods can occur with subdivisions of larger existing lots, remodelings, and expansions. Thus, long-range preservation goals in San Mateo might include future study of these neighborhoods as either local or National Register Historic Districts.”

In 1990, the California State Office of Historic Preservation (the state agency responsible for identification, evaluation, registration, and protection of California’s irreplaceable cultural and historic resources resources) wrote to the Mayor of San Mateo with comments on the 1989 *Historic Buildings Survey Final Report* and characterized neighborhoods west of El Camino as containing:

“...at least two huge (500+ resources) Register<sup>1</sup>-eligible residential districts in the areas....Because of the undocumented districts, certain types were underrepresented in the inventory, viz., large houses ca. 1910-1930 and houses ca. 1930-1940. In addition, apartment buildings may need further attention, even though several appear in the inventory.”

The City has not yet conducted the necessary survey to formally identify the historic districts. With the General Plan update process underway, now is the ideal time to conduct the necessary historic surveys and identify the historic resources and districts in San Mateo. The study must be conducted to adequately evaluate effects of the intense growth proposed in the General Plan and the dramatic changes that will occur over the next 20 years.

### Effects to Historic Resources and Districts

San Mateo’s historic neighborhoods attract residents and visitors alike, but are in danger due to the piecemeal demolition of these homes in these neighborhoods without adequate environmental review and public notice under the California Environmental Quality Act.

---

<sup>1</sup> California Register of Historical Resources

Baywood residents have recently mobilized to express their opposition to demolishing these historic homes and their desire for the City to preserve and protect the historic homes and protect the historic integrity of the neighborhood. Dozens of Baywood neighbors have written the City Council to request the City identify the many historic resources and districts in the City before additional homes are lost to demolition.

A thorough historic resources survey has been performed in many Peninsula cities, including Burlingame. The General Plan update must identify the resources in order to identify effects and mitigation measures for the significant effects that will surely occur with such intense development proposed in the General Plan and expected through AB 9 and 10. The City should identify stronger policies and design guidelines that truly protect our historic neighborhoods.

### Request for Historic Resources Workshop

Historic resources have been an ongoing issue in San Mateo and will continue to be an issue of concern. Dozens of my neighbors have written the City Council and expressed interest in historic preservation in San Mateo. I request a General Plan EIR workshop to address the scope, methodology, and potential mitigation measures for the historic resources sections of the General Plan and EIR.

### NOP COMMENTS AND SCOPING REPORT

It is critical that the voices of residents be heard in this General Plan Update process. Is the City planning to prepare a Scoping Report to identify issues raised in response the NOP? It is a useful tool that would help residents understand the comments other residents have made regarding the scope of the EIR, and clearly show comments were accurately captured. The Scoping Report should be available on the City website, and interested parties notified when it is available. The EIR should describe how the city will track NOP comments to clearly show how comments are addressed in the EIR.

### HOUSING

The General Plan and EIR should describe how the City will address SB 9 and 10 and their resulting changes in the existing conditions in the City, including increased density, traffic, loss of green space and wildlife habitat, water use, wastewater capacity, school capacity, etc.

How will the city reconcile the long-standing public support for Measure Y with SB 9 and 10 and the wide-ranging impacts they will have on established residential neighborhoods?

## SUMMARY

I have lived in San Mateo since 1980 and my husband since 1988. The historic homes and neighborhoods with architectural integrity are key aspects of what makes San Mateo special. We are continually dismayed to see so many classic, historic homes being outright demolished or remodeled to contemporary styles (or worse) without respecting the surrounding neighborhood styles. The San Mateo policies and design guidelines specify protection of neighborhoods and historic resources but do not seem adequate to protect these resources.

We look forward to participating in a workshop on historic resources, reviewing a Scoping Report, and seeing how our comments are addressed in the EIR. Please include our contact information in the General Plan and EIR mailing list. Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Laurie Hietter".

Laurie and Randy Hietter  
223 Irving Street  
San Mateo, CA 94402  
lauriehietter@gmail.com





STATE OF CALIFORNIA

Gavin Newsom, Governor

## NATIVE AMERICAN HERITAGE COMMISSION

RECEIVED

FEB 08 2022

CITY OF SAN MATEO  
BUILDING DIVISION

January 25, 2022

Zachary Dahl  
City of San Mateo Community Development Department  
330 West 20<sup>th</sup> Avenue  
San Mateo, CA 94403

Re: 2022010160, City of San Mateo General Plan Update Project, San Mateo County

Dear Mr. Dahl:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, § 15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

**Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

CHAIRPERSON  
**Laura Miranda**  
Luiseño

VICE CHAIRPERSON  
**Reginald Pagaling**  
Chumash

PARLIAMENTARIAN  
**Russell Altebery**  
Karuk

COMMISSIONER  
**William Mungary**  
Paiute/White Mountain  
Apache

COMMISSIONER  
**Isaac Bojorquez**  
Ohlone-Costanoan

COMMISSIONER  
**Sara Dutschke**  
Miwok

COMMISSIONER  
**Buffy McQuillen**  
Yokayo Pomo, Yuki,  
Nomlaki

COMMISSIONER  
**Wayne Nelson**  
Luiseño

COMMISSIONER  
**Stanley Rodriguez**  
Kumeyaay

EXECUTIVE SECRETARY  
**Christina Snider**  
Pomo

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West Sacramento,  
California 95691  
(916) 373-3710  
[nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
[NAHC.ca.gov](http://NAHC.ca.gov)



## AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

  - a. A brief description of the project.
  - b. The lead agency contact information.
  - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
  - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

  - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

  - a. Alternatives to the project.
  - b. Recommended mitigation measures.
  - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).
- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:

  - a. Type of environmental review necessary.
  - b. Significance of the tribal cultural resources.
  - c. Significance of the project's impacts on tribal cultural resources.
  - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

  - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

**7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:

- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

**8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

**9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

**10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**

- a. Avoidance and preservation of the resources in place, including, but not limited to:
  - i. Planning and construction to avoid the resources and protect the cultural and natural context.
  - ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - i. Protecting the cultural character and integrity of the resource.
  - ii. Protecting the traditional use of the resource.
  - iii. Protecting the confidentiality of the resource.
- c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
- e. Please note that 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 to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
- f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

**11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
- b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
- c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: [http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation\\_CalEPAPDF.pdf](http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf)



## SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at:

[https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf).

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

## NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([http://ohp.parks.ca.gov/?page\\_id=1068](http://ohp.parks.ca.gov/?page_id=1068)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
  - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
  - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
  - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
  - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
  - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:  
[Andrew.Green@nahc.ca.gov](mailto:Andrew.Green@nahc.ca.gov).

Sincerely,



Andrew Green  
Cultural Resources Analyst

cc: State Clearinghouse



Dear Mr. Dahl,

I want to urge the City of San Mateo to identify and protect our historic neighborhoods. San Mateans can be proud of how many special neighborhoods are found throughout our city, each with its own unique character and charm.

Although many historic districts were recognized in a 1989 study and by the State Office of Historic Preservation, San Mateo has not followed through with identifying, evaluating and protecting these districts. Now is the time for the City to address this need.

With the General Plan under review, documenting historic Baywood, Aragon, San Mateo Park, Hayward Park, North Central districts for the Draft EIR is more important than ever!

As Deputy Director of Community Development, you have both the opportunity and the responsibility to draft, complete and enact policy that will ensure San Mateo's beautiful past is not forgotten or destroyed in the name of "progress."

Sincerely,  
Nancy Weller  
323 Virginia Ave.  
San Mateo

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Dear Mr. Zachary Dahl  
Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20<sup>th</sup> Avenue  
San Mateo, California 94403

SUBJECT: Comments responding to San Mateo General Plan EIR Notice of Preparation (NOP)

Dear Mr. Dahl:

You have asked for public comment on the proposed content and scope of the EIR for San Mateo's General Plan 2040. Please include the following in the program-level EIR:

1. An evaluation of project alternatives that will avoid negative impacts to historic resources in the known, but as yet undocumented historic districts in residential areas west of El Camino Real and throughout other neighborhoods in San Mateo.
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3. An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
4. A summary of comments received in response to the NOP so the public can understand the issues before the Draft EIR is published.

Thank you for your consideration.

Sincerely,

Tracey E. Lee

[traceyelee@gmail.com](mailto:traceyelee@gmail.com)

335 Fairfax Ave.

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Hello Zachary,

We have lived in Aragon and Baywood since 1972. Obviously, we love the neighborhoods and have enjoyed living in San Mateo. One reason I live here is because of the lovely old buildings on B Street in downtown, and the older homes with Mediterranean or Tudor or art deco architecture in the Aragon and Baywood districts, as well as the Victorian style homes in the North Central neighborhood. I truly think these older commercial buildings and homes should be valued and protected by the City. (However, one thing that should be considered is the signage permitted on B Street; often it distracts from the architecture of the buildings).

If you think about towns in California and all over the world, isn't it the towns with restored and vibrant downtowns and lovely older homes that are lively, walkable, enjoyable places to live and visit?

San Mateo has changed a lot since we first moved here. Many changes have been good; some not so good. I do not oppose increased housing. We need to build more housing if we want our children to live here and if we want people in the service industry to be able to live here. But I don't think the building of additional housing and the preservation of the older buildings and neighborhoods are opposed. Housing can be built along transportation corridors, such as El Camino Real, and the older neighborhoods can be preserved.

Thank you.

Peggy

Peggy Berlese  
Herzig & Berlese  
414 Gough Street, Suite 5  
San Francisco, CA 94102  
415-861-8800

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Dear City Council-

I am excited the City is working on a new General Plan, as I believe we are at a critical time in our great City's development.

Of course there is a huge need to determine the growth and direction of our retail, office and housing base while being realistic about the potential to achieve any set goals, including the timing to affect any changes and the social and economic cost to do so.

Change and growth is both necessary and almost certain to happen no matter what we do, so guiding that change and growth is critical to ensure it happens in a manner that benefits our populace including considerations for traffic, parking, pollution, crime, and aesthetics.

I was born at Peninsula Hospital and grew up in San Mateo until I was 9 years old, then moved to Hillsborough. Since 1996 I have lived back here in San Mateo and love all it has to offer including the downtown retail (which has great potential), proximity to the freeways, schools, library, parks, and housing base.

We live in a 1928 vintage Spanish Mediterranean home which has been modernized over the years, yet retains the original Spanish tile façade accents, interior and exterior wrought iron details, arches, Spanish tile roof, tile courtyard, and many other irreplicable features that come with these historic homes.

As you know there are many historic districts in San Mateo, including Baywood, Aragon, San Mateo Park, Glazenwood, Hayward Park, and North Central.

Unfortunately, many districts have not been formally recognized by the City, though my understanding is they were identified in the 1989 Downtown historic study and have been recognized by the State Office of Historic Preservation.

Without this recognition I and many of my neighbors are concerned we will lose a great deal of this historic base and charm that makes San Mateo a wonderful place to live.

If residents and developers can entirely tear down or materially demolish/renovate these architectural masterpieces they will do so, and we will no longer have a city filled with these gems.

I believe the City must identify and protect these historic districts and resources by identifying policies that allow for the identification, evaluation and protection of these structures and that these actions must be considered in the Draft EIR for the General Plan.

Simply increasing the housing base without these considerations will clearly have an adverse effect on our historic resources and districts throughout the great city of San Mateo.

Thank you for your time and attention on this enormous task that clearly will shape our wonderful City for the next century.

Roger

Roger Oser

533 Edinburgh Street  
San Mateo, CA 94402  
t 650-358-5262  
m 408-472-6888  
Roger.Oser@nmrk.com

Dear Mr. Zachary Dahl  
Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20th Avenue  
San Mateo, California 94403

SUBJECT: Comments responding to San Mateo General Plan EIR Notice of Preparation (NOP)

Dear Mr. Dahl:

You have asked for public comment on the proposed content and scope of the EIR for San Mateo's General Plan 2040. Please include the following in the program-level EIR:

1. An evaluation of project alternatives that will avoid negative impacts to historic resources in the known, but as yet undocumented historic districts in residential areas west of El Camino Real and throughout other neighborhoods in San Mateo.
2. Inclusion of an updated historic resources survey/inventory that identifies San Mateo's historic resources, both individually and collectively as districts, so that an evaluation of the impacts of projected growth can be adequately addressed.
3. An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
4. A summary of comments received in response to the NOP so the public can understand the issues before the Draft EIR is published.

Thank you for your consideration so that we may preserve the San Mateo's historic beauty and character.

Sincerely,  
Shana Larson, resident of Baywood

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Dear Mr. Zachary Dahl  
Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20th Avenue  
San Mateo, California. 94403

SUBJECT: Comments responding to San Mateo General Plan EIR Notice of Preparation NOP

Dear Mr. Dahl,

You have asked for public comment on the proposed content and scope of the EIR for San Mateo's General plan 2040. Please conduct and include the historic survey of San Mateo and develop policies to protect our historic neighborhoods.

The Valladares family has lived in the beautiful Baywood neighborhood for 36 years. This is our dream city and home. My husband and I grew up in San Francisco and we dreamed one day we could live in San Mateo and raise our future family. We fell in love with San Mateo and all the historical neighborhoods. Baywood, Aragon, San Mateo Park, Glazenwood, Hayward Park, North Central, etc. All these neighborhoods and districts need to be recognized and preserved now. These truly unique and treasured neighborhoods are an integral part of San Mateo's history, culture, diversity, charm, success and future.

The amazing book, "SAN MATEO A CENTENNIAL HISTORY" by Mitchell P. Postel, published in 1994 chronicles our great and ambitious city. Think of all the brave men and women who settled here and had a vision like no other to create our beloved San Mateo.

The City should identify policies that allow for the identification, evaluation, and protection of historic districts. Please consider project alternatives that will avoid negative impacts to these neighborhoods. These actions must be considered in the Draft EIR for the General Plan.

We hope that you will consider our passionate concerns and understand how we feel about our cherished history and loyal communities.

Thank you for your consideration,

Sincerely,

Jill Valladares and family  
374 Fairfax Avenue  
San Mateo California 94402

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We also must add that we chose to live in Baywood more than 20 years ago because of the architectural unity of the neighborhood, among other elements. This appreciation rubbed off on our daughter and son-in-law, who bought a house in the Historic Irvington District of Portland. The neighborhood is a source of pride to the entire city of Portland. It's beautiful, has the same type of community spirit as Baywood, and has changed gracefully with the times. We just visited and were amazed at the amount of remodeling and construction taking place in the neighborhood. It's happening in a controlled and considerate manner that seems to be serving everyone's needs. It's also interesting that these vintage homes created a niche of architects and contractors who specialize in historic home construction. Change is inevitable, but Irvington shows that it can happen beautifully, without conflict. (Property values in Irvington also increase at a faster rate than in the rest of Portland.)

We hope these points resonate with you. Thank you for your consideration.

Sincerely,

Bruce and Rita Armstrong



— SAN MATEANS FOR RESPONSIVE GOVERNMENT —

To: Zachary Dahl, Deputy Director  
San Mateo Community Development Department

Re: Notice of Preparation for General Plan Update Draft EIR

Dear Mr. Dahl,

**San Mateans for Responsive Government** submits the following comments as part of the scoping for the EIR for the General Plan update. We urge the city to ensure that all of these issues are adequately addressed in the EIR as well as providing comprehensive alternative analyses that can reduce the negative impacts.

First and foremost, **all parts of the General Plan Update should comply with voter approved Measure Y** before it is adopted by the City Council. The EIR needs to address how any discrepancies in the various scenarios will be addressed and reconciled. If they are not to be reconciled, the EIR should describe the legal basis on which the updated General Plan can be adopted in contravention of the provisions of Measure Y.

Furthermore, the content and scope of an adequate General Plan EIR must also have an in-depth analysis of the potential impacts of SB 9 and SB 10 for all R-1 zoned areas in San Mateo "whether or not they are in a Study Area." The increased population resulting from the state-enabled conversion of single-family lots to multi-family will have significant impacts on all of the environmental topics that will be examined in the EIR and must be evaluated.

In each element's evaluation, we are looking for **locally derived data-backed specifics**, rather than broad brush statements that whatever scenario is chosen, the city or other agency can meet the additional demand. Unfortunately, broad brush assurances have been common in past environmental evaluations, only to be proven woefully inadequate as projects are developed. Internal departments like police and fire, and external entities like Cal Water and the school districts respond that they can meet whatever the increased demand for services. **Specifically how, on what timeline and at what cost to San Mateo's residents and businesses will that be done?**

Our comments often require evaluation in multiple elements of the EIR. Information in one section will inform comments and evaluations made in another. We expect that the city will require the necessary coordination of information across elements.

Our specific issues:

### **Infrastructure Demands**

**What population are our existing facilities like sewer, water supply and solid waste disposal designed to accommodate?** Identify what other communities are served by the San Mateo sewer plant and their projected growth impacts. Identify how potable water will be available for the increased state population projections, especially factoring in continuing drought conditions and at what cost.

**What population can our existing police and fire services (both staffing and equipment) accommodate?** How will an increased number of taller buildings and increased density affect fire and police services, especially through their equipment needs? Relate any new fire equipment and emergency services demands to specific changes in heights and density. What will be the budget impacts for providing any additional services?

### **Green Environment**

**The green environment** in our city will be affected by increased growth. This can be through a **loss of trees** - especially heritage trees- which affects air quality, climate, aesthetics, and more. How will they be protected? **Park facilities** also provide that green environment. When asked about how more park land can be provided for a greatly increased population, consultants' answers rely on larger projects being required to provide private open spaces. That response is not acceptable, since it is likely to be the increased population in smaller developments, units from lot splits, ADUs etc. that will have a big impact on population. Data and specifics please on how the city will achieve its park acreage goals.

### **Vehicle Miles Traveled**

Many residents, and many city leaders are pushing to get people out of their cars by **greatly reducing vehicle ownership and/or usage, lower Vehicle Miles Traveled (VMT) etc.** by putting more dense development near transit. And people talk about doing that in tandem with reducing parking, so people just give up driving. Most San Mateans are skeptical that this approach will work. **We need much better local data to evaluate the decisions around such major changes.**

The current situation at the Hillsdale Garden Apartments is a perfect case study for how people who find it almost impossible to park, and who have a very well served Caltrain station and several major SamTrans lines well within walking distance, just don't get the message to get rid of their cars. Historically, Hillsdale Garden Apts were the classic transit oriented neighborhood. Its residents owned few cars and used Caltrain often. Why have transit patterns there changed so much?

The EIR should include a targeted/doorstep/sidewalk survey of people who live in the Apartments (plus in a similar situation, if the city can think of another one) to ask about vehicle ownership and usage, transit usage etc, and why they do as they do. Residents of most new multi-family developments with reduced parking are still tied to owning and using vehicles, resulting in increased, spill-over parking off site, negatively impacting adjacent neighborhoods. Factors such as working double and triple jobs at odd hours, needing access to frequent medical treatment, to recreation, to school, soccer and

music lessons for children, trips to larger supermarkets and Costco; etc., all of which cannot be accommodated via transit might be uncovered. **The EIR must look for facts about how people really live to direct policies about land use, circulation, transportation and the provision of parking.**

When people do give up driving their cars (or give them up altogether) they do it by stitching together other ways to support their needs. Uber/Lyft/taxis/helpful neighbors make the extra trips to get them places. These **still result in VMT - just not in their own car**. And there are all of the delivery trucks which are much more prevalent in the neighborhoods, delivering all of those items that people may no longer drive to the store to get themselves. There are more of those trucks than many realize, since some companies have expanded their fleets with "anonymous" white vans, etc. There are even bigger mail trucks now. Again, the purchase still results in VMT. And then there are all of the Door Dash, etc. food deliveries, when people can't or don't go out to restaurants. **All of those substitute VMTs need to be captured.**

### **Walking to Transit**

The city (and others) use 1/2 mile as a metric for walking to transit. The city posts a 1/2 mile map on its website, which was created in 2017 to address the 1/2 mile impact for creating ADUs. If anything in the General Plan is going to depend on that kind of metric, a much more refined map needs to be created. Simply drawing circles around identified transit stops (including bus stops that may no longer even be served by SamTrans) and calling that the 1/2 mile to transit-assumes that people can travel in a straight "as the crow flies" manner. Swim across Marina lagoon? Walk across Highways 101 or 92? **The EIR needs a map showing true 1/2 mile walks to existing and likely to continue to exist transit stops.** Such a map will show where the true transit deserts are.

**Additionally, the EIR needs a map to designate the slopes on all of our streets**, so that the hillier, more difficult parts to walk or cycle are readily apparent. For example, a large part of planning area 6 (Laurelwood shopping and Campus Drive) is already acknowledged to be a transit desert, even on the existing map. And for the parts that are supposedly near transit, one must hike up Hillsdale Blvd. to Clearview Way to catch a bus. This is completely infeasible for a large part of our population.

How will the EIR address the fact that **the city has no control over the routes that SamTrans continues to operate or decided to drop?** The built environment is depending on a very unstable premise when we include SamTrans stops for transit planning, especially away from ECR.

### **Natural Disaster Planning**

**Wildfires** are an increasing issue, unfortunately now year round. In the General Plan workshops, this was dismissed as probably only affecting area 6 (Laurelwood shopping area). Do wildfires, once they get going and particularly blowing in the accompanying high winds, only affect the closest adjacent areas? The people in Coffee Park and other parts of Santa Rosa learned how disastrous that assumption can be. All of San Mateo is vulnerable if a wildfire gets going in our hills. That type of situation was cited as the

Poway decision, where the environment can change the project, rather than the usual vice versa.

**What kind of emergency evacuation plans will the city have for its residents?**

Especially if we have concentrated people near transit (which will not be operating during a wildfire) and have succeeded in getting them to give up vehicle ownership. How do they stay safe when the city has put them in a situation where they have no independent transportation?

**Noise**

**Noise will increase** with increased population, especially resulting in traffic - from any source. Will electrification create more noise and will the elevated electric train tracks carry train noise even further? If buses increase, how does that affect noise? Add in the substitute VMTs (see above) and those who continue to drive themselves. With significant increase in population and jobs here, we will quickly exceed our 60db noise standards for residences. The people at the MidPen development at ECR and 29th routinely complain to the city about the maintenance noise - gardeners, Recology trucks etc that serve the mixed uses around them. How will we deal with that problem as we densify near transit (and elsewhere). Just changing the standards to say it is not a problem, is not acceptable EIR evaluation. There should be a scientific basis provided for how acceptable various levels of noise, for what periods of time and at various times of day, are. A loud Recology truck that comes multiple times a week at 5:30 AM is not the same impact as one weekly trip at 9AM, and the EIR should reflect that.

**Lifestyle Choices**

Under population and housing, I don't know how to capture this factor, but we all "know" that there are **people who want a specific lifestyle** - especially with a young growing family. They will commute great distances to have a quiet residential setting - the traditional American Dream of a detached single family house with yard, good parks, good recreation, good schools, etc.

Intense building near transit will not lure these people back, even if the housing would be for the same price. It is not the lifestyle they want. Can the EIR identify people who choose to live at a distance, at least at this phase of their family life, to better include their impact on housing, land use and transportation/circulation/VMT? Start at the centers of employment - even the city's employees - to find these long commuters and their reasons. And make an effort to get beyond simple answers like it being "cheaper" to live at a distance. Look for lifestyle choices, too.

**Historic Resources**

You have already received comments urging **a proper historical survey of the city**, and we support those requests. This survey is needed especially for areas that have already been indicated as likely eligible for listing as historic districts. This is already a policy in the current General Plan and was an effort that the city began, and then dropped, some years ago. It is an unfulfilled promise to keep our city's history an important part of what San Mateo offers its residents and businesses, and one this EIR needs to address.

**Program Level EIR / Project Level EIR Relationship**

We request that the city make it explicitly clear just **how this EIR will be used for any future projects**. The General Plan EIR has been described as a general program-level EIR, with supplemental environmental and design review occurring as each specific project is proposed. Larger neighborhood, district and citywide issues can be handled at this program level, so individual project proponents can be made aware as to how broader issues will affect their proposals. Residents should clearly understand what additional CEQA or design reviews will be undertaken for future, specific projects that directly affect them and their community.

Please contact me, on behalf of San Mateans for Responsive Government, if you have any questions about these comments.

Thank you for your coordination of this important effort.

Michael Weinbauer  
San Mateans for Responsive Government  
[limitheights2018@gmail.com](mailto:limitheights2018@gmail.com)

Dear Deputy Director Dahl,

The irreparable destruction of our historic neighborhoods recently hit our family directly when we saw the plans at 415 Fairfax Drive where investors purchased a wonderful historic home only to be convinced by their architect to tear it down and build a 5K square foot monstrosity in its place. Many of us have lived in the historic Baywood neighborhood for decades and invested much of our lives and savings into our homes to keep them in keeping with the history and architecture here. It is incredibly distressing to witness a Planning Commission that is clearly more interested in maximizing profits for themselves and their friends in the building industry rather than protecting the historical gems in our community. The reckless abandon in which large ADUs, many larger than the original houses, are being haphazardly approved is especially stressful.

Related to all of this is the proposed content and scope of the EIR for San Mateo's General Plan 2040. We are concerned that historical homes and districts will be skimmed over in this plan. I urge you to please include the following in your study:

- An evaluation and prioritization of project alternatives that will protect our historic resources in the community.
- Protection of know, even if yet undocumented, historic districts in residential areas across San Mateo, including west of El Camino and specifically including the historic home at 415 Fairfax Drive.
- An updated historic resources survey / inventory that identifies San Mateo's historic resources, both individually and collectively as districts.
- A plan to address the impacts of projected population growth on our historic resources.
- Protection against investors and architects who are so easily navigating the loopholes in the system so that they can personally profit while doing harm to the neighborhoods.
- An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
- A summary of comments received in response to the NOP so the public can understand the issues before the DRAFT EIR is published.

Thank you for your consideration,  
Steve McKay  
Citizen, San Mateo

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Dear Mr. Dahl:

You have asked for public comment on the proposed content and scope of the EIR for San Mateo's General Plan 2040. Please include the following in the program-level EIR:

1. An evaluation of project alternatives that will avoid negative impacts to historic resources in the known, but as yet undocumented historic districts in residential areas west of El Camino Real and throughout other neighborhoods in San Mateo.
2. Inclusion of an updated historic resources survey/inventory that identifies San Mateo's historic resources, both individually and collectively as districts, so that an evaluation of the impacts of projected growth can be adequately addressed.
3. An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
4. A summary of comments received in response to the NOP so the public can understand the issues before the Draft EIR is published.

Thank you for your consideration.

Sincerely,

Christine Jeck

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Zachary,

You have asked for comments regarding the above proposed content and EIR for San Mateo's General Plan 2040. I would appreciate your including my comments that.

I have been a forty one year resident of Baywood Knolls and want you to know that I appreciate all of San Mateo's neighborhoods. The uniqueness and in some areas the historic nature of the different areas of San Mateo is what makes it a special place to have lived and raised my children. I would hope that in the above EIR you will take this into account as well as making sure that any specific aspects of San Mateo's historic areas are protected from development that would change the nature of our city. Avoiding the negative impacts of SB9 and SB10 on what makes San Mateo special should be of utmost importance.

Lastly, I would hope that a summary of comments that are received would be made available to the public before a draft EIR is published.

Thank you,

Dennis Tietz

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State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Bay Delta Region  
2825 Cordelia Road, Suite 100  
Fairfield, CA 94534  
(707) 428-2002  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

GAVIN NEWSOM, Governor  
CHARLTON H. BONHAM, Director



February 10, 2022

Mr. Zachary Dahl  
City of San Mateo  
330 West 20<sup>th</sup> Avenue  
San Mateo, CA 94403  
[zdahl@cityofsanmateo.org](mailto:zdahl@cityofsanmateo.org)

Subject: City of San Mateo General Plan Update, Notice of Preparation of a Draft Environmental Impact Report, SCH No. 2022010160, City and County of San Mateo

Dear Mr. Dahl:

The California Department of Fish and Wildlife (CDFW) reviewed the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) for the City of San Mateo General Plan Update (Project).

CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et seq.) pursuant to CEQA Guidelines § 15386 for commenting on projects that could impact fish, plant, and wildlife resources (e.g., biological resources). CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as a California Endangered Species Act (CESA) Incidental Take Permit (ITP), a Native Plant Protection Act (NPPA) Permit, a Lake and Streambed Alteration (LSA) Agreement, or approval under other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

## PROJECT LOCATION

San Mateo is located in the San Francisco Bay Area in Northern California. It is bordered by the San Francisco Bay and City of Foster City to the east, the City of Burlingame and Town of Hillsborough to the north, the City of Belmont to the south, and the Town of Hillsborough and unincorporated San Mateo County to the west. Major interstates and State routes include Highway 101 and California State Routes 92 and 82.

## PROJECT DESCRIPTION

The City of San Mateo is preparing comprehensive updates to its existing General Plan. The update is expected to be completed in 2023 and will guide the City's development and conservation through 2040. The General Plan Update will include revisions to the policies and land use map of the existing General Plan. The updated General Plan will include all State-required elements, and an optional element, Urban Design.

Mr. Zachary Dahl  
 City of San Mateo  
 February 10, 2022  
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The overall purpose of the General Plan Update is to create a policy framework that articulates a vision for the City's long-term physical form and development, while preserving and enhancing the quality of life for San Mateo residents. The key components of this Project will include broad community goals for the future of the City of San Mateo and specific policies and implementing actions that will help meet the goals. The General Plan Update will add new and expanded policy topics to address the current requirements of State law, modernize the City's policy framework, and address land use mapping issues and inconsistencies. To achieve the General Plan vision, the City has analyzed three alternatives for ten Study Areas that were developed through an extensive public process. The Study Areas include areas near transit; areas where current buildings are aging, vacant, or not maintained; or areas where property owners have expressed interest in considering redevelopment of the property. The Study Areas are the locations where the majority of growth is projected to occur; however, changes could still occur outside of these areas.

## ENVIRONMENTAL SETTING

The draft EIR should provide sufficient information regarding the environmental setting ("baseline") to understand the Project's, and its alternative's (if applicable), potentially significant impacts on the environment (CEQA Guidelines, §§ 15125 and 15360). CDFW recommends that the draft EIR provide baseline habitat assessments for special-status plant, fish, and wildlife species located and potentially located within the Project area and surrounding lands, including but not limited to all rare, threatened, or endangered species (CEQA Guidelines, § 15380). The draft EIR should describe aquatic habitats, such as wetlands and/or waters of the U.S. or State, and any sensitive natural communities or riparian habitat occurring on or adjacent to the Project site.

The special-status species that have the potential to occur in or near the Project site, include, but are not limited to:

Common Name	Scientific Name	Status
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	FT
Myrtle's silverspot butterfly	<i>Speyeria zerene myrtleae</i>	FT
Western burrowing owl	<i>Athene cunicularia</i>	SSC
California Ridgway's rail	<i>Rallus obsoletus obsoletus</i>	FE, SE
California black rail	<i>Laterallus jamaicensis coturniculus</i>	ST
American peregrine falcon	<i>Falco peregrines anatum</i>	SP

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Western bumble bee	<i>Bombus occidentalis</i>	SC
Salt-marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE, SE
San Francisco gartersnake	<i>Thamnophis sirtalis tetrataenie</i>	FE, SE, SP
San Mateo woolly sunflower	<i>Eriophyllum latilobum</i>	FE, SE, SR
San Francisco owl's-clover	<i>Triphysaria floribunda</i>	SR
Arcuate bush-mallow	<i>Malacothamnus arcuatus</i>	SR
Longfin smelt	<i>Spirinchus thaleichtys</i>	FC, ST
San Francisco collinsia	<i>Collinsia multicolor</i>	SR
Western leatherwood	<i>Dirca occidentalis</i>	SR
Franciscan onion	<i>Allium peninsulare</i> var. <i>franciscanum</i>	SR
Acuate bush-mallow	<i>Galactosamines arcuatus</i>	SR
Nesting birds Bats Plants Aquatic species Terrestrial species		
<b>Notes:</b> FT= federally threatened under ESA; FE = federally endangered under ESA; FC = federal candidate for federal listing under ESA; SE = state endangered under CESA; ST = state threatened under CESA; SC = state candidate for state listing under CESA; SSC = state species of special concern; SP = state listed as fully protected; SR = state rare under the Native Plant Protection Act		

Habitat descriptions, and the potential for species occurrence, should include information from multiple sources: aerial imagery; historical and recent survey data; field reconnaissance; scientific literature and reports; the U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Consultation System; and findings from positive occurrence databases such as California Natural Diversity Database (CNDDDB). Based on the data and information from the habitat assessment, the draft EIR should adequately assess which special-status species are likely to occur on or near the Project site, and whether they could be impacted by the Project.

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: <https://wildlife.ca.gov/Conservation/Survey-Protocols>.

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Botanical surveys for special-status plant species, including those with a California rare plant rank (<http://www.cnps.org/cnps/rareplants/inventory/>), must be conducted during the blooming period for all species potentially impacted by the Project within the Project area and adjacent habitats that may be indirectly impacted by, for example, changes to hydrology, and require the identification of reference populations. Please refer to CDFW protocols for surveying and evaluating impacts to rare plants, and survey report requirements, available at: <https://wildlife.ca.gov/Conservation/Plants>.

## **IMPACT ANALYSIS AND MITIGATION MEASURES**

The draft EIR should include the reasonably foreseeable direct and indirect changes (temporary and permanent) that may occur with implementation of the Project (CEQA Guidelines, §§ 15126, 15126.2, and 15358). This includes evaluating and describing impacts such as:

- Encroachments into riparian habitats, wetlands, or other sensitive areas;
- Potential for impacts to special-status species;
- Loss or modification of breeding, nesting, dispersal and foraging habitat, including vegetation removal, alteration of soils and hydrology, and removal of habitat structural features (e.g., snags, rock outcrops, overhanging banks);
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic, or human presence; and
- Obstruction of movement corridors, fish passage, or access to water sources and other core habitat features.

The draft EIR should also identify reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the project's contribution to the impact (CEQA Guidelines, § 15355). Although a project's impacts may be less-than-significant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact, e.g., reduction of habitat for a special-status species should be considered cumulatively considerable.

Based on the comprehensive analysis of the direct, indirect, and cumulative impacts of the Project, the CEQA Guidelines direct the Lead Agency to consider and describe all feasible mitigation measures to avoid potentially significant impacts in the draft EIR and mitigate potentially significant impacts of the Project on the environment (CEQA Guidelines, §§ 15021, 15063, 15071, 15126.4, and 15370). This includes a discussion of impact avoidance and minimization measures for special-status species, which are recommended to be developed in early consultation with CDFW, the USFWS, and the

Mr. Zachary Dahl  
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National Marine Fisheries Service. These measures should be incorporated as enforceable Project conditions to reduce impacts to biological resources to less-than-significant levels.

Fully protected species such as American peregrine falcon and San Francisco garter snake may not be taken or possessed at any time (Fish and Game Code, § 3511, 4700, 5050, and 5515). Therefore, the draft EIR should include measures to ensure complete avoidance of these species.

## **REGULATORY REQUIREMENTS**

### **California Endangered Species Act**

Please be advised that a CESA ITP must be obtained if the Project has the potential to result in take<sup>1</sup> of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required to obtain a CESA ITP.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened or endangered species (Pub. Resources Code, §§ 21001, subd. (c), 21083; CEQA Guidelines, §§ 15380, 15064, and 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The Lead Agency's FOC does not eliminate the project proponent's obligation to comply with CESA.

### **Lake and Streambed Alteration Agreement**

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et seq., for Project activities affecting rivers, lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are generally subject to notification requirements. CDFW, as a Responsible Agency, will consider the CEQA

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<sup>1</sup> Take is defined in Fish and Game Code section 86 as hunt, pursue, catch, capture, or kill, or attempt any of those activities.

Mr. Zachary Dahl  
City of San Mateo  
February 10, 2022  
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document for the Project and may issue an LSA Agreement. CDFW may not execute the final LSA Agreement until it has complied with CEQA as a Responsible Agency.

### **Migratory Birds and Raptors**

CDFW also has authority over actions that may disturb or destroy active nest sites or take birds. Fish and Game Code sections 3503, 3503.5, and 3513 protect birds, their eggs, and nests. Fully protected bird species may not be taken or possessed at any time (Fish and Game Code, § 3511). Migratory birds are also protected under the federal Migratory Bird Treaty Act.

### **ENVIRONMENTAL DATA**

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. [Pub. Resources Code, § 21003, subd. (e)]. Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDDB. The CNDDDB online field survey form and other methods for submitting data can be found at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported to CNDDDB can be found at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

### **FILING FEES**

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code, § 711.4; Pub. Resources Code, § 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

If you have any questions, please contact Mr. Will Kanz, Environmental Scientist, at [Will.Kanz@wildlife.ca.gov](mailto:Will.Kanz@wildlife.ca.gov); or Wesley Stokes, Senior Environmental Scientist (Supervisory), at [Wesley.Stokes@wildlife.ca.gov](mailto:Wesley.Stokes@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
Erin Chappell  
Regional Manager  
Bay Delta Region

cc: State Clearinghouse (SCH No. 2022010160)



1. Dear Mr. Dahl:

I am writing regarding the proposed content and scope of the EIR for San Mateo's general plan 2040. I would like to request that you include the following in the program-level EIR:

1. An evaluation of project alternatives that will avoid negative impacts to historic resources in the known, but as yet undocumented historic districts in residential areas west of El Camino Real and throughout other neighborhoods in San Mateo.

2. Inclusion of an updated historic resources survey/inventory that identifies San Mateo's historic resources, both individually and collectively as districts, so that an evaluation of the impacts of projected growth can be adequately addressed.

3. An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.

4. A summary of comments received in response to the NOP so the public can understand the issues before the draft EIR is published.

Thank you for your consideration.

Sincerely,

Elvira Auerweck

346 FRanklin Street

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Notwithstanding my strong disagreement with Sacramento's heavy-handed, one size fits all approach to housing, I understand that you and the City of San Mateo need to follow the rules as they currently exist. That doesn't mean, however, that the things that make San Mateo a great place to live need to be sacrificed to the altar of expedient housing growth.

San Mateo is unique in the Bay Area in having several historic neighborhoods that have been largely maintained (as opposed to Burlingame and its McMansion approach to zoning, or newer cities that lack much in the way of historical housing). Let's be honest, we can ruin these neighborhoods by blindly following YIMBY housing policies, but doing so won't make a dent in the overall housing needs. Ruining historic neighborhoods would, however, succeed in destroying the very thing that makes the neighborhoods so desirable. In addition to alienating the current residents of these historic neighborhoods, their destruction could have a longer-term impact on property values and therefore tax revenues.

Before making any long-term decisions, I would strongly encourage you to complete a historic survey of San Mateo and work to preserve the historic neighborhoods to the maximum extent possible. Again, historic neighborhoods can be ruined and the overall housing picture won't be notably improved. Let's be smart about planning for the future of the city, in a way that both preserves existing historical resources and provides housing for future growth.

Thank you for your consideration of my concerns.

Glenn Voyles  
421 Fairfax Avenue

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Please protect our neighborhoods and stop the overbuilding in San Mateo.  
People are leaving our state not entering it.  
Thanks you.  
JoAnne Kiefus, 300 Jackson.

JoAnne Kiefus

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Dear Mr. Dahl

I'm writing to you about the San Mateo General Plan update and EIR.

The General plan update proposes 30-50% growth. I fear that level of growth will result in many demolitions, remodels, and additions that will have a significantly negative impact on historic districts and resources. This growth will likely erase the character of historic neighborhoods and disrupt the nature of the relationships between homeowners that holds them together.

Please consider significantly lower growth levels, such as 10-20% maximum.

Also, please complete the historic neighborhood and home surveys before completing the draft EIR to understand how growth will impact them.

Thank you,

John Hietter  
223 Irving Street  
San Mateo, CA 94402

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Mr. Dahl,

This letter is a public comment on the proposed content and scope of the EIR for San Mateo's General Plan 2040. As a homeowner of a vintage 1930 home on Parrott Drive in Baywood, I strongly encourage that the City makes genuine efforts to preserve this beautiful and historic neighborhood. It is truly a jewel of this City and of San Mateo County and the loss of its character would be tragic. It is our history that defines us, and not only Baywood, but also other historic neighborhoods must be preserved as the City plans for growth.

Please include the following in the program-level EIR:

1. An evaluation of project alternatives that will avoid negative impacts to historic resources in the known, but as yet undocumented, historic districts in residential areas west of El Camino Real and throughout other neighborhoods in San Mateo.
2. Inclusion of an updated historic resources survey/inventory that identifies San Mateo's historic resources, both individually and collectively as districts, so that an evaluation of the impacts of projected growth can be adequately addressed.
3. An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
4. A summary of comments received in response to the NOP so the public can understand the issues before the Draft EIR is published.

Thank you.

Best regards,

Karen Vitale  
Homeowner  
478 Parrott Drive, San Mateo 94402  
[karenavitale@comcast.net](mailto:karenavitale@comcast.net)

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February 10, 2022

Zachary Dahl, Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20th Ave.  
San Mateo, CA 94403

**Subject:** Notice of Preparation (NOP) of Draft Environmental Impact Report (EIR)

**Lead Agency:** City of San Mateo Community Development Department

**Project Title:** San Mateo General Plan Update

Dear Mr. Dahl:

Since my first letter to you on this subject (January 17, 2022), I have become aware of new information that was not apparent to me at the time, but which I address below. The ***Land Use and Circulation Alternatives Evaluation*** (City of San Mateo, January 14, 2022) states, “the ten Study Areas are the locations where the most growth is projected to occur; however, changes could still occur outside those areas. The General Plan will allow for continued growth outside of the Study Areas based on existing densities, regulations and state law.”

Elsewhere in the evaluation report, it states, “The alternatives presented in this workbook do not propose a change to properties zoned R-1 (One-Family Residential) within the city, whether or not they are in a Study Area. However, under SB 9, single-family zoned properties could still accommodate future growth by building a duplex and/or by splitting the lot into two separate lots that would allow two units each.”

City staff is currently in the process of implementing SB 9, and the City Council recently declared their intention to “explore” adopting SB 10 as a Priority “A” goal for 2022-2023.

SB 9 allows any single family lot to be split into two parcels. SB 10, if adopted, allows ten housing units to be built on each parcel, plus an allowance for two ADUs per parcel. Simple math suggests that it is both possible and plausible that any single family home in San Mateo could be replaced by 24 apartment units.

Potential cumulative impacts of such incursions into established single family neighborhoods are of profound magnitude that will carry wide-ranging and long-lasting environmental, social, economic, and cultural changes deep into the future. Limiting the EIR to only the Study Areas would be irresponsible, fraught with unintended consequences, and leading inevitably to an incomplete and deficient evaluation. The content and scope of an adequate General Plan EIR must have an in-depth analysis of the potential impacts of SB 9 and SB 10 for all R-1 zoned areas in San Mateo “whether or not they are in a Study Area.”

It must also include impacts to historic resources, known and potentially known, and which can only become known by conducting a historic resources inventory. Absent an inventory that identifies historic resources, and an evaluation of the impacts SB 9 and SB 10 will have on those resources and the neighborhoods where they are located, the EIR will be inarguably inadequate.

Many individuals, organizations and agencies have submitted written comments. For the sake of transparency, please make all comments available to the public shortly after the submittal deadline and provide notification as to where to access them. Thank you.

Sincerely,  
Keith Weber,  
San Mateo

Cc: Prasanna Rasiah, City Attorney



Mr. Zachary Dahl  
Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20<sup>th</sup> Avenue  
San Mateo, California 94403

Dear Mr. Dahl:

I am the owner of 359 Fairfax Avenue in the Baywood section of San Mateo. I purchased my home in 2006 and did a major remodel shortly thereafter that preserved the original facade of the house. Many of us in the neighborhood are concerned about changes that may occur in our neighborhood.

My understanding is that you have asked for comment on the proposed content and scope of the EIR for San Mateo's General Plan 2040. Many of us would like to include the following in the program-level EIR:

- An evaluation of project alternatives that will avoid negative impacts to historic resources in the known, but as yet undocumented historic districts in residential areas west of El Camino Real and throughout other neighborhoods in San Mateo.
- Inclusion of an updated historic resources survey/inventory that identifies San Mateo's historic resources, both individually and collectively as districts, so that an evaluation of the impacts of projected growth can be adequately addressed.
- An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
- A summary of comments received in response to the NOP so the public can understand the issues before the Draft EIR is published.

Thank you very much for your time and consideration.

Sincerely,  
Kevin Laughlin  
650 201 3998

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Dear Mr. Dahl,

A brief glance at the *General Plan Land Use and Circulation Alternatives Evaluation* caused me to send these additional comments on the General Plan Update NOP, in addition to my emailed letter of February 8.

I just learned that the three alternatives that will be considered in the General Plan include growth of 30%, 40%, or 52% over the next 20 years (please also consider this a comment on the Alternatives Evaluation report). I was horrified. San Mateo would be unrecognizable. San Mateo's growth has never been anywhere close to these proposed growth rates. The 10-year growth rates since 1980 were 10% or less; the average 10-year growth was 7%. The growth since 1980--40 years--was only 33%. What is the impetus for such massive, unprecedented growth?

These levels of growth are not compatible with the desires of San Mateo residents who voted for Measure Y. The low growth alternative should be on the order of 15% or less. High growth should not be more than 20%.

The growth of San Mateo must be considered in light of the growth in the Bay Area, and the infrastructure necessary for that growth. The infrastructure (water, wastewater, electricity, roads, public transit, bridges, fire, police, schools, airport, etc.) in San Mateo, and the Bay Area, is woefully inadequate to support the proposed levels of growth.

San Mateo infrastructure has not been maintained and it is not clear how the city will pay for the infrastructure needed to support even 30% growth, or the growth that could come due to SB 9 and SB 10. I took Caltrain to San Francisco between 2011 and 2019. The trains and BART were standing room only and now they struggle for funding. The freeways were clogged. Our infrastructure is not adequate to support the proposed level of growth. "Transit-oriented housing" is a cruel hoax. There is no transit for the housing along the corridor.

The General Plan growth will exacerbate the flight from San Mateo and the Bay Area. The proposed level of growth will severely degrade our quality of life in San Mateo.

What or who is driving this vision of growth? It is not the neighbors I speak with or those who voted for Measure Y.

The General Plan Update process is long, complicated, and difficult for non-planners to really understand. It is time-consuming to dig into all the documents, synthesize the information, and compare to previous information. This is important to so many citizens who don't have the time to comment. I am doing my best to inform my community. From my conversations with my neighbors, I feel like I speak for many.

Please do not consider alternatives for growth of more than 15% population increase over 20 years.

Laurie Hietter

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Dear Mr. Dahl:

You have asked for public comment on the proposed content and scope of the EIR for San Mateo's General Plan 2040. please include the following:

1. An evaluation of project alternatives that will ensure that those historic neighborhoods west of El Camino (not yet identified) will receive the proper evaluation and categorization before any decisions are made on shifts for the neighborhood
2. Inclusion of an updated historic resources survey/inventory so that homes and neighborhoods can be properly assessed and impact of projected growth can be properly identified
3. An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
4. A summary of all comments received to the NOP so we can understand the issues before the Draft EIR is published.

I have been a 30 year resident of San Mateo and a 20 year resident of the beautiful Baywood area. We love the old vintage feel of the neighborhood and are one of many in our neighborhood who worked tirelessly to ensure our remodel fit into the character and elegance of the neighborhood. My husband Neal and I want to ensure the historic nature of these homes are honored.

Thank you!

Ilana Tandowsky  
Harvard Road  
San Mateo

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Dear Mr. Zachary Dahl  
Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20th Avenue  
San Mateo, California 94403

SUBJECT: Comments responding to San Mateo General Plan EIR Notice of Preparation (NOP)

Dear Mr. Dahl:

You have asked for public comment on the proposed content and scope of the EIR for San Mateo's General Plan 2040. We have an opportunity to save our history similar to the way many other countries preserve their history by not allowing our historical neighborhood homes to be razed. Our children for generations to come should be able to see and enjoy the historic neighborhoods. Please include the following in the program-level EIR:

1. An evaluation of project alternatives that will avoid negative impacts to historic resources in the known, but as yet undocumented historic districts in residential areas west of El Camino Real and throughout other neighborhoods in San Mateo.
2. Inclusion of an updated historic resources survey/inventory that identifies San Mateo's historic resources, both individually and collectively as districts, so that an evaluation of the impacts of projected growth can be adequately addressed.
3. An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
4. A summary of comments received in response to the NOP so the public can understand the issues before the Draft EIR is published.

Thank you for your consideration.

Sincerely,

Mara Castillo

Dear Mr. Zachary Dahl  
Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20<sup>th</sup> Avenue  
San Mateo, California 94403

SUBJECT: Comments responding to San Mateo General Plan EIR Notice of Preparation (NOP)

Dear Mr. Dahl:

You have asked for public comment on the proposed content and scope of the EIR for San Mateo's General Plan 2040. Please include the following in the program-level EIR:

1. An evaluation of project alternatives that will avoid negative impacts to historic resources in the known, but as yet undocumented historic districts in residential areas west of El Camino Real and throughout other neighborhoods in San Mateo.
2. Inclusion of an updated historic resources survey/inventory that identifies San Mateo's historic resources, both individually and collectively as districts, so that an evaluation of the impacts of projected growth can be adequately addressed.
3. An evaluation of project alternatives that will avoid negative impacts of SB9 and SB10.
4. A summary of comments received in response to the NOP so the public can understand the issues before the Draft EIR is published.

Thank you for your consideration.

Sincerely,

May Lin Cooperstein  
216 Harvard Rd.  
San Mateo, CA 94402

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Dear Mr Dahl:

I am writing to provide my comments, as requested, on the NOP for the General Plan 2040 Environmental Impact Report (EIR).

As you know there is a significant and growing concern among San Mateo residents about San Mateo's historic resources and neighborhood ambiance. Neighbors are concerned that demolition, remodeling, and other developments will gradually transform the neighborhoods to something other than what they chose when they moved here. This concern is not limited to the general plan study areas but to all neighborhoods. We should be able to definitively answer how any proposed changes would impact the history and character of the area under development.

The county and state supported the initial San Mateo historic survey in 1989. The 1989 survey documented ample evidence that sections of San Mateo qualify for historic designations. City staff and councils have never followed up on these findings, despite calls to do so in previous years. It is time to remedy this situation.

It is incumbent on the City to understand the historic assets it has, and to make sensible decisions on what should be preserved and what can change. I believe doing a thorough survey of our historic resources is a minimum requirement. If we don't know what assets we have, how can we protect them from harm? You cannot rebuild an artifact of history!

We need housing but should not blindly destroy icons of our past or sacrifice our common heritage through ignorance or passivity. Please encourage a thorough effort in this aspect of the report.

I am also most concerned about the unprecedented growth as outlined in the alternatives. A growth projection of a fifty percent increase in population will require infrastructure increases of commensurate scale. Do we know if this is even possible? We know our water supply, electric supply and sewage removal are stressed today. Our public transportation will also need significant expansion. What will happen to the environment as we address these limitations to growth? No form of expansion in this area will be without consequence and cost.

Finally, a significant number of people in San Mateo have told me they do not believe public comments are taken seriously. This diminishes the likelihood and effectiveness of public outreach. Therefore, I would also ask that the method for consideration of public comments become transparent so people will believe that they have at least been heard and hopefully encouraged by the attention these comments receive.

Best Regards,

Michael Nash  
[mnash900@yahoo.com](mailto:mnash900@yahoo.com)  
650-400-6274

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Dear Mr. Dahl,

My husband and I are long time residents of Baywood- having moved to our home on Fairfax Avenue in 1994. We understand the necessity of putting forth a reasonable plan for growth. We understand the City is soliciting comments regarding the General Plan. ( GP) We have reviewed the GP online, along with the vision statement. Obviously, there has been a great deal of work and thought to put these forth.

At this time, we feel strongly that the City consider the impacts of the EIR with respect to the proposed GP. This is an historic neighborhood (our home was built in 1936 and we are the third owner) and we ask that the City consider all facets of anticipated growth on San Mateo.

SB9 and 10 should be considered against the backdrop of the historic homes in many areas of San Mateo. Change is inevitable- as is growth. Let's work to make it positive change for the community.

Best,

Pam Mills Casey  
345 Fairfax  
San Mateo, CA  
94402

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Dear Zachary,

Thank you for the work you are doing for San Mateo community development .

Not an easy task to balance the many conflicting wants and needs of such a vibrant and diverse community.

I believe we must increase housing and know the city is working toward this goal. I also hope it will be done with an approach that not only considers but identifies the historic areas and its homes. ( For the record, I do not have a historic home.)

We have many homes within San Mateo neighborhoods, which have historic homes - in Baywood, Hayward Park, Aragon, Glazenwood, San Mateo Park and more.

Please include in the EIR plan a policy and a plan to identify historic resources and districts.

I know Redwood City has

one - <https://www.redwoodcity.org/home/showpublisheddocument/5103/635782756595400000>

Thank you for your consideration

Patty Anixter

650-483-8554

[panixter@mac.com](mailto:panixter@mac.com)

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Deputy Director of Community Development

Hello Mr. Dahl,

We are long-time residents of San Mateo (47 years) and live on Castilian Way. Our home was built in 1936, and we believe our neighborhood and surrounding areas should be designated as "historic." Many of the houses are distinctive and have the ambiance of the 1920 and 1930s. Indeed, these two decades and the homes built in that era project a unique period in San Mateo's history and should be preserved. This area also has many trees and shrubs as old as the homes.

The City needs to develop policies to protect our historic neighborhoods.

Regards,

Pete and Lynda Paffrath

Pete Paffrath  
215 Castilian Way  
San Mateo, CA 94402  
650-520-6349

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Zachary Dahl  
Deputy Director  
Community Development Department  
City of San Mateo  
330 West 20<sup>th</sup> Avenue  
San Mateo, California 94403

Mr. Dahl:

We are opposed to the Alston's plan to demolition the existing home at 415 Fairfax Avenue.

My wife Cheryl and I, Ron Whiteside, have resided at 250 Harvard Road in San Mateo since 1981. We live on the corner of Harvard and Fairfax, a few doors down and across the street from 415 Fairfax. We obviously love the Baywood area – since we have chosen to live here for so long.

We were participants in the Augusts 4<sup>th</sup> meeting about plans for 415 Fairfax and stated our concerns – that:

- The proposed demolition will destroy a historic home that has been carefully maintained and fits well into the neighborhood
- The proposed replacement home is very large and bulky for the lot size. Without the area referred to as an ADU, it is still much larger than other homes in our immediate area
- The proposed ADU will not add housing, which is what the law intended. It is attached to the main house and can easily be converted to a simple addition by adding a door. The new owners stated that it would be used as guest quarters for visiting family. How does this qualify as an ADU?

Numerous neighbors have sent emails to the SM Planning Department, eloquently expressing their concerns about this proposed project. We agree with all of the concerns in their emails, so I won't repeat them, but we definitely concur.

Houses in Baywood don't turn over very often, as long-time owners want their treasured homes to go to family or others who will cherish and respect the old-world charm of the house and Baywood neighborhood. New owners often renovate their homes and may make additions – always with respect for their heritage home. Really, why would a new home owner say how much they just love Baywood; yet want to destroy a heritage fabric in our community that makes Baywood what it is; the neighborhood "they just love".

We urge you to deny the new owners' current request to tear down the house at 415 Fairfax Avenue and encourage them to develop a plan that respects the home, our Baywood neighborhood, and their new neighbors.

Regards

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Dear Mr. Dahl,

We are writing to provide public comment regarding the Environmental Impact Report for San Mateo's General Plan 2040. SB9 and SB10 could potentially have future negative impacts in our city neighborhoods, as well as other neighborhoods in California.

We'd like to encourage you to identify historic districts in San Mateo and develop policies to protect those historic neighborhoods - hopefully including Baywood, where we live. Please consider the potential negative impacts of SB9 and SB10 on these neighborhoods, as well as ways to alleviate some of those potentials in your planning.

Thank you for considering this,

Stephen and Martha Park  
418 Virginia Ave.  
San Mateo, CA 94402

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A P P E N D I X   B

P R O J E C T S   I N C L U D E D   I N  
B U I L D O U T   P R O J E C T I O N S



APN	Project/Site Name	Address	Existing Land Use	Proposed General Plan Land Use Designation	Proposed Housing Units	Proposed Retail Square Footage	Proposed Office Square Footage
033163050	222 S Fremont	717 E 3rd Ave	Single Family Residential	Residential Medium Density	40	-	-
033171040	Monte Diablo and North Kingston	145 Kingston	Multi-Family Residential	Residential Low/Medium Density	-	-	-
033171050	Monte Diablo and North Kingston	139 Kingston	Multi-Family Residential	Residential Low Density	-	-	-
033171060	Monte Diablo and North Kingston	131 Kingston	Single Family Residential	Residential Low/Medium Density	-	-	-
033171180	Monte Diablo and North Kingston	1218 Monte Diablo	Commercial	Residential Medium Density	34	-	-
033281130	477 9th Ave Mixed Use Development	477 9th Ave	Office	Mixed-Use Medium	120	5,645	28,100
034144240	Essex at Central Park	E 5th Ave/San Mateo Dr	Commercial	Mixed-Use High	80	7,000	12,960
034176050	222 E. 4th Ave – Draeger’s	222 E 4th Ave	Commercial	Mixed-Use High	10	17,658	104,722
034176070	222 E. 4th Ave – Draeger’s	400 S B st	Commercial	Mixed-Use High	-	619	1,238
034176080	222 E. 4th Ave – Draeger’s	410 S B St	Commercial	Mixed-Use High	-	688	1,375
034176090	222 E. 4th Ave – Draeger’s	*no Site Address* San Mateo 00000	Commercial	Mixed-Use High	-	3,575	7,150
034179010	445 S B St Bespoke	302 E 4th Ave	Commercial	Mixed-Use High	60	89,415	66,585
034179020	445 S B St Bespoke	407 S B St	Commercial	Mixed-Use High	-	693	1,385
034179030	445 S B St Bespoke	415 S B St	Commercial	Mixed-Use High	-	680	1,361
034179040	445 S B St Bespoke	445 S B St	Commercial	Mixed-Use High	-	2,192	4,383
034179050	445 S B St Bespoke	4th/Railroad	Commercial	Mixed-Use High	-	1,383	2,766
034179060	445 S B St Bespoke	4th/Railroad	Commercial	Mixed-Use High	-	680	1,360
034181160	435 E. 3rd Ave.	435 E 3rd Ave	Commercial	Mixed-Use High	5	1,381	34,000
034183060	KIKU CROSSING	480 E 4th Ave	Commercial	Residential High Density	225	-	-
034185030	Block 21 500 E. 3rd Ave	312 Delaware St	Single Family Residential	Mixed-Use High	-	682	1,363
034185040	Block 21 500 E. 3rd Ave	318 Delaware St	Single Family Residential	Mixed-Use High	-	682	1,363
034185050	Block 21 500 E. 3rd Ave	320 Delaware St	Quasi Public	Mixed-Use High	-	696	1,392
034185110	Block 21 500 E. 3rd Ave	307 Claremont St	Industrial	Mixed-Use High	-	726	1,452
034185120	Block 21 500 E. 3rd Ave	512 3rd Ave	Commercial	Mixed-Use High	-	686	1,373
034185140	Block 21 500 E. 3rd Ave	373 Claremont St	Commercial	Mixed-Use High	-	517	1,035
034185150	Block 21 500 E. 3rd Ave	507 4th Ave	Commercial	Mixed-Use High	-	877	1,753
034185160	Block 21 500 E. 3rd Ave	300 Delaware St	Commercial	Mixed-Use High	111	1,380	179,560
034185170	Block 21 500 E. 3rd Ave	525 4th Ave	Commercial	Mixed-Use High	-	687	1,374
034185190	Block 21 500 E. 3rd Ave	311 Claremont St	Multi-Family Residential	Mixed-Use High	-	637	1,275
034185200	Block 21 500 E. 3rd Ave	315 Claremont St	Vacant	Mixed-Use High	-	679	1,358
034194030	616 S. B Street Nazareth Vista Mixed Use Development	616 S B St	Commercial	Residential Medium Density	48	6,919	-
034194140	616 S. B Street Nazareth Vista Mixed Use Development	600 S B St	Commercial	Residential Medium Density	-	-	-
034200220	Central Park South (Residential)	885 S El Camino Real	Public Park	Mixed-Use Medium	60	2,760	33,500
034275130	1 Hayward Avenue	5 Hayward Ave	Office	Mixed-Use Medium	18	1,098	4,495
034302140	1495 S. El Camino Real	1495 El Camino Real	Office	Mixed-Use Low/Medium	35	2,000	20,910
034413080	1600-1620 S. El Camino Real & 1541-1543 Jasmine Street	1600 El Camino Real	Commercial	Mixed-Use Medium	44	404	1,617
034413090	1600-1620 S. El Camino Real & 1541-1543 Jasmine Street	1604 El Camino Real	Commercial	Mixed-Use Medium	-	302	1,208
034413100	1600-1620 S. El Camino Real & 1541-1543 Jasmine Street	1610 El Camino Real	Commercial	Mixed-Use Medium	-	349	1,394
034413110	1600-1620 S. El Camino Real & 1541-1543 Jasmine Street	1620 El Camino Real	Commercial	Mixed-Use Medium	-	350	1,402
035215050	Hayward Park Station	1701 Leslie St	Industrial	Mixed-Use Medium	-	3,654	14,618
035215060	Hayward Park Station	1731 Leslie St	Industrial	Mixed-Use Medium	30	1,075	4,301
035221010	Hayward Park Station	1741 Leslie St	Industrial	Mixed-Use Medium	-	574	2,296
035221020	Hayward Park Station	1753 Leslie St	Industrial	Mixed-Use Medium	-	516	2,064
035242090	Concar Passage	678 Concar Dr	Commercial	Mixed-Use Medium	961	32,000	3,403
035242140	Concar Passage	666 Concar Dr	Commercial	Mixed-Use Medium	-	19,413	77,653
035242160	Concar Passage	1855 Delaware St	Commercial	Mixed-Use Medium	-	1,413	5,654
035242170	Concar Passage	1880 Grant St	Commercial	Mixed-Use Medium	-	18,182	72,727
035242190	Concar Passage	690 Concar Dr	Commercial	Mixed-Use Medium	-	1,479	5,917
035242200	Concar Passage	1820 Grant St	Commercial	Mixed-Use Medium	-	1,480	5,919
035242210	Concar Passage	640 Concar Dr	Commercial	Mixed-Use Medium	-	7,558	30,230
035242220	Concar Passage	Concar Dr/S Delaware St	Commercial	Mixed-Use Medium	-	2,021	8,083
035383200	Fish Market 1855 S. Norfolk St	1863 S Norfolk St	Commercial	Mixed-Use Medium	239	12,595	50,381
039030340	1919 O'Farrell Street	1919 O'Farrell St	Office	Mixed-Use Medium	49	2,421	9,682
039352060	Hillsdale Terraces	2700 El Camino Real	Commercial	Mixed-Use High	-	2,025	4,051
039352070	Hillsdale Terraces	2750 El Camino Real	Commercial	Mixed-Use High	-	1,625	3,250
039352090	Hillsdale Terraces	2790 El Camino Real	Commercial	Mixed-Use Medium	68	13,078	4,670

APN	Project/Site Name	Address	Existing Land Use	Proposed General Plan Land Use Designation	Proposed Housing Units	Proposed Retail Square Footage	Proposed Office Square Footage
039353060	2850 El Camino Real	2850 El Camino Real	Office	Mixed-Use Medium	18	7,458	1,340
039490170	Hillsdale Shopping Center	41 Hillsdale Blvd	Commercial	Mixed-Use Medium	1,998	297,423	1,189,691
040031040	Bay Meadows Modification, PA20-033	3069 Kyne St (BMSP - Residential Block 6)		Residential Medium Density	108	-	-
040031230	Bay Meadows Modification, PA20-020	2600 S Delaware St		Mixed-Use Medium	114	10,244	241,756
040031240	Bay Meadows Modification, PA20-020	2600 S Delaware St		Mixed-Use Medium	-	2,474	9,898
040102580	477 E. Hillsdale Blvd (Hillsdale Inn)	341 Hillsdale Blvd	Commercial	Residential Medium Density	230	-	-
040102620	477 E. Hillsdale Blvd (Hillsdale Inn)	477 Hillsdale Blvd	Commercial	Residential Medium Density	230	-	-
040102630	477 E. Hillsdale Blvd (Hillsdale Inn)		Commercial	Residential Medium Density	-	-	-
041521010	Peninsula Heights	2988 Campus Dr	Office	Residential Low Density	290	-	-
041521020	Peninsula Heights	2800 Campus Dr	Single Family Residential	Residential Low Density	-	-	-
041522010	Peninsula Heights	2655 Campus Dr		Residential Low Density	-	-	-
041522020	Peninsula Heights	2755 Campus Dr	Office	Residential Low Density	-	-	-
<b>Total</b>					<b>5,225</b>	<b>592,749</b>	<b>2,272,793</b>

A P P E N D I X   C

A I R   Q U A L I T Y   A N D   G R E E N H O U S E  
G A S   E M I S S I O N S   D A T A





## Land Use Statistics - San Mateo, San Mateo County

	Existing Conditions	Buildout Estimates	Projected Growth (Proposed Project)	Growth Factor from Existing
	2019	2040	2019-2040	for Horizon Year 2040
<b>City + Sphere of Influence (SOI)</b>				
Housing Units	43,770	65,180	21,410	0.49
Population	108,020	160,040	52,020	0.48
Employment	62,440	79,360	16,920	0.27
Service Population	170,460	239,400	68,940	0.40
<b>City</b>				
Housing Units	42,400	63,800	21,400	0.50
Population	104,600	156,590	51,990	0.50
Employment	61,230	77,760	16,530	0.27
Service Population	165,830	234,350	68,520	0.41
<b>Sphere of Influence (SOI)</b>				
Housing Units	1,370	1,380	10	0.01
Population	3,420	3,450	30	0.01
Employment	1,210	1,600	390	0.32
Service Population	4,630	5,050	420	0.09

## City of San Mateo Community Criteria Air Pollutant Emissions Inventory and Forecast: City + SOI

Notes:

<sup>1</sup> Source: Kittelson and Associates, Inc. 2023; EMFAC2021 Version 1.0.2 Emissions Database (Region - San Mateo)

<sup>2</sup> Sources: PG&E and PCE 2022 and CalEEMod User's Guide for natural gas criteria air pollutant emission rates. Excludes criteria air pollutant emissions natural gas use from Permitted Sources within the City.

<sup>3</sup> Source: OFFROAD 2021.

<sup>4</sup> Source: CalEEMod User's Guide

### City + SOI

#### EXISTING (2019)

Phase	Existing Criteria Air Pollutant Emissions (lbs/day) - City + SOI				Existing Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	260	1,940	203	85	45	337	35	15
Energy <sup>2</sup>	35	656	49	49	6	120	9	9
Offroad Equipment <sup>3</sup>	390	246	10	8	71	45	2	1
Consumer Products <sup>4</sup>	1,698				310			
<b>Total</b>	<b>2,383</b>	<b>2,842</b>	<b>262</b>	<b>141</b>	<b>433</b>	<b>501</b>	<b>46</b>	<b>25</b>

#### EXISTING (2040 No Project Baseline)

Phase	Existing Criteria Air Pollutant Emissions (lbs/day) - City + SOI				Existing Criteria Air Pollutant Emissions (tons/year) - City + SOI			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	71	352	182	61	12	61	32	11
Energy <sup>2</sup>	35	656	49	49	6	120	9	9
Offroad Equipment <sup>3</sup>	390	246	10	8	71	45	2	1
Consumer Products <sup>4</sup>	1,698				310			
<b>Total</b>	<b>2,193</b>	<b>1,255</b>	<b>241</b>	<b>118</b>	<b>400</b>	<b>226</b>	<b>42</b>	<b>21</b>

#### Year 2040 (Proposed Project)

Phase	Project (2040) Criteria Air Pollutant Emissions (lbs/day) - City + SOI				Project (2040) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	92	459	237	80	16	80	41	14
Energy <sup>2</sup>	49	922	69	69	9	168	13	13
Offroad Equipment <sup>3</sup>	550	314	13	10	100	57	2	2
Consumer Products <sup>4</sup>	2,819				515			
<b>Total</b>	<b>3,510</b>	<b>1,696</b>	<b>319</b>	<b>159</b>	<b>640</b>	<b>305</b>	<b>56</b>	<b>28</b>

#### NET CHANGE (from 2040 No Project Baseline)

Phase	Net Change (2040-2019) Criteria Air Pollutant Emissions (lbs/day) - City + SOI				Net Change (2040-2019) Criteria Air Pollutant Emissions (tons/year) - City + SOI			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	21	107	55	19	4	19	10	3
Energy <sup>2</sup>	14	266	20	20	3	49	4	4
Offroad Equipment <sup>3</sup>	160	67	3	2	29	12	1	0
Consumer Products <sup>4</sup>	1,121	0	0	0	205	0	0	0
<b>Total</b>	<b>1,317</b>	<b>441</b>	<b>78</b>	<b>41</b>	<b>240</b>	<b>79</b>	<b>14</b>	<b>7</b>
BAAQMD Threshold	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	Yes	No	No	Yes	Yes	No	No

#### NET CHANGE (from Existing) - Friant Ranch

Phase	Net Change (2040-2019) Criteria Air Pollutant Emissions (lbs/day) - City + SOI				Net Change (2040-2019) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	-168	-1,480	34	-5	-29	-257	6	-1
Energy <sup>2</sup>	14	266	20	20	3	49	4	4
Offroad Equipment <sup>3</sup>	160	67	3	2	29	12	1	0
Consumer Products <sup>4</sup>	1,121				205			
<b>Total</b>	<b>1,127</b>	<b>-1,147</b>	<b>57</b>	<b>17</b>	<b>207</b>	<b>-196</b>	<b>10</b>	<b>3</b>
BAAQMD Threshold	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	No	No	No	Yes	No	No	No

## AQMP Consistency Analysis

### Comparison of the Change in Population and VMT in San Mateo(O-D Method)

Category	Existing	GP 2040 Update (Proposed Project)	Change from Existing	
			Change	Percent
Population	108,020	160,040	52,020	48.2%
Employment	62,440	79,360	16,920	27.1%
SP	170,460	239,400	68,940	40.4%
VMT per Day	3,918,221	5,108,862	1,190,641	30.4%
VMT/SP	22.99	21.34	-1.65	-7.2%

Note Origin-Destination (O-D) Methodology is not necessarily the same methodology for SB 743.

Modeling of vehicle miles traveled (VMT) is provided by Kittelson and Associates, Inc. 2023. VMT from passenger vehicles and trucks that have an origin or destination in the City using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375).

For accounting purposes, there are three types of trips:

- » Vehicle trips that originated and terminated within the City (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips, and their emissions, are attributed to the City.
- » Vehicle trips that either originated or terminated (but not both) within the City (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for these trips is attributed to the City.
- » Vehicle trips that neither originated nor terminated within the City. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not counted towards the City's VMT or emissions.

Area Sources - Residential Consumer Products<sup>a</sup>

Emissions = EF x Building Area  
EF = 2.14E-05 lbs/sqft/day

Sources/Notes:  
a. California Emissions Estimator Model, Version 2021.1, Users Guide. Appendix D3.

AVERAGE HOUSING SQFT ASSUMPTIONS

Year Structure was Built	Percent of Housing Stock <sup>a</sup>	Average Square Feet of New Single Family Homes <sup>b</sup>	Average Square Feet (Weighted)
2020 or Later	0.10%	2,448	2
2010 to 2019	4.40%	2,524	111
2000 to 2009	5.40%	2,404	130
1990 to 1999	6.10%	2,116	129
1980 to 1989	9.40%	1,819	171
1979 or earlier	74.70%	1,699	1,269
	100%		1,813

Sources/Notes: <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>  
a. United States Census Bureau, Selected Housing Characteristics, County of San Mateo, 2023. Table DP04. 2021 American Community Survey 5-Year Estimate <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2019/>  
b. United States Census Bureau, Characteristics of New Housing, Characteristics of New Single-Family Houses Completed, Median and Average Square Feet by Location. <https://www.census.gov/construction/chars/completed.html>

	Existing 2019	2040 GP Update
	EIR Study Area	EIR Study Area
Housing Units	43,770	65,180
Residential SQFT	79,345,150	131,746,125
lbs VOC per day	1,698	2,819
tons VOC per year	310	515

Notes:  
<sup>1</sup> New housing units constructed post-2020 assumed to be 2,448 square feet (based on Source 2).  
<sup>2</sup> Daily emissions converted to annual emissions by multiplying by 365 days/year.

## Area Sources

Source: OFFROAD2021. <https://arb.ca.gov/emfac/emissions-inventory/2f6c8fa1b8ec8bd9f8a4f23b3d84c74a77f77161>

### OFFROAD2021 Estimate based on:

Agricultural Equipment

Construction Equipment

Lawn & Garden

Light Commercial and Industrial Equipment

Based on the percentage of agricultural acreage within the City compared to the County of San Mateo (San Mateo County 2019, San Mateo CAP Update)

Based on the percentage of total County Service Population Change Attributable to City (US Census Bureau 2023)

Based on the percentage of City population in San Mateo compared to the San Mateo County Population (US Census Bureau 2023)

Based on the percentage of employment in San Mateo compared to San Mateo County (EDD 2023)

### Farmland Acreage

Source: San Mateo General Plan EIR, Conservation, Open Space, and Recreation Element, 2023.

### Construction (percentage of total County SP change attributable to City)

Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020; and US Census Bureau

<https://onthemap.ces.census.gov/>

### Employment

Source: Employment Development Department (EDD). 2023, March 20 (Accessed). Unemployment Rates (Labor Force).

<https://labormarketinfo.edd.ca.gov/cgi/dataanalysis/labForceReport.asp?menuchoice=LABFORCE>

2019 Existing		ROG Exhaust	NO <sub>x</sub> Exhaust	CO Exhaust	SO <sub>2</sub> Exhaust	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust <sup>a</sup>
		lbs/year					
Agricultural	No agricultural use in the EIR Study Area	0.0	0.0	0.0	0.0	0.0	0.0
Construction Equipment		7	25	168	0	2	2
Lawn & Garden		259	35	3,031	0	3	2
Light Commercial/ Industrial Equipment		124	186	5,756	0	5	4
<b>TOTAL City+ SOI</b>		<b>390</b>	<b>246</b>	<b>8,954</b>	<b>0</b>	<b>10</b>	<b>8</b>

Horizon Year 2040		ROG Exhaust	NO <sub>x</sub> Exhaust	CO Exhaust	SO <sub>2</sub> Exhaust	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust <sup>a</sup>
Forecast Adjusted for:		lbs/year					
Agricultural	No agricultural use in the EIR Study Area at buildout	0	0	0	0	0	0
Construction Equipment	Similar to historic	7	25	168	0	2	2
Lawn & Garden	Proportional to housing growth	385	52	4,513	0	5	4
Light Commercial/ Industrial Equipment	Proportional to employment growth	158	237	7,316	0	6	5
<b>TOTAL City+ SOI</b>		<b>550</b>	<b>314</b>	<b>11,996</b>	<b>1</b>	<b>13</b>	<b>10</b>

## **San Mateo County OFFROAD2019**

Source: <https://arb.ca.gov/emfac/emissions-inventory/e681c37cb7093ea75b08ef761dfdc43659684b99>

Construction includes: Over 25 horsepower, self-propelled, diesel equipment only subjected to In-Use Regulation; AND Under 25 horsepower equipment not subject to the In-Use Regulation

Model Output: OFFROAD2021 (v1.0.3) Emissions Inventory

Region Type: County

Region: San Mateo

Calendar Year: 2019

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2019 Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

# Construction and Mining

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd
San Mateo	2019	Construction and Mining - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	1.24E-04	1.60E-03	1.18E-03	3.66E-06	5.82E-05	5.35E-05
San Mateo	2019	Construction and Mining - Cranes	Aggregate	Aggregate	Diesel	7.73E-04	8.81E-03	5.03E-03	8.70E-06	4.06E-04	3.73E-04
San Mateo	2019	Construction and Mining - Crawler Tractors	Aggregate	Aggregate	Diesel	1.82E-03	2.03E-02	1.06E-02	2.15E-05	1.00E-03	9.21E-04
San Mateo	2019	Construction and Mining - Excavators	Aggregate	Aggregate	Diesel	1.79E-03	1.85E-02	1.50E-02	3.87E-05	7.70E-04	7.08E-04
San Mateo	2019	Construction and Mining - Graders	Aggregate	Aggregate	Diesel	1.34E-03	1.51E-02	6.46E-03	1.46E-05	6.58E-04	6.06E-04
San Mateo	2019	Construction and Mining - Misc - Asphalt Pavers	Aggregate	Aggregate	Gasoline	6.91E-04	5.96E-04	2.56E-02	9.87E-07	2.27E-04	1.72E-04
San Mateo	2019	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Gasoline	1.95E-04	3.04E-04	7.23E-03	6.26E-07	6.43E-05	4.86E-05
San Mateo	2019	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	4.81E-05	3.03E-04	1.76E-04	4.34E-09	1.02E-05	7.73E-06
San Mateo	2019	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Gasoline	9.47E-03	5.00E-03	2.64E-01	4.36E-06	2.22E-03	1.67E-03
San Mateo	2019	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Diesel	5.87E-05	3.66E-04	2.84E-04	6.33E-09	1.32E-05	9.98E-06
San Mateo	2019	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Gasoline	6.90E-03	4.84E-03	2.29E-01	5.11E-06	2.51E-03	1.90E-03
San Mateo	2019	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Diesel	4.10E-05	2.43E-04	2.33E-04	3.26E-07	1.25E-05	1.12E-05
San Mateo	2019	Construction and Mining - Misc - Cranes	Aggregate	Aggregate	Gasoline	7.80E-05	2.13E-04	3.51E-03	4.95E-07	3.39E-06	2.56E-06
San Mateo	2019	Construction and Mining - Misc - Crushing/Proc. Equipment	Aggregate	Aggregate	Gasoline	4.65E-05	3.13E-05	1.63E-03	2.58E-08	1.87E-05	1.41E-05
San Mateo	2019	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Gasoline	9.96E-04	5.84E-04	2.49E-02	4.41E-07	2.46E-04	1.86E-04
San Mateo	2019	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Diesel	5.85E-06	3.70E-05	2.00E-05	5.07E-10	1.28E-06	9.63E-07
San Mateo	2019	Construction and Mining - Misc - Excavators	Aggregate	Aggregate	Diesel	4.18E-05	2.64E-04	1.43E-04	3.63E-09	8.89E-06	6.72E-06
San Mateo	2019	Construction and Mining - Misc - Other	Aggregate	Aggregate	Gasoline	2.95E-05	1.04E-04	2.78E-03	7.77E-07	5.61E-06	4.24E-06
San Mateo	2019	Construction and Mining - Misc - Other	Aggregate	Aggregate	Diesel	1.23E-04	7.70E-04	6.04E-04	1.34E-08	2.69E-05	2.03E-05
San Mateo	2019	Construction and Mining - Misc - Pavers	Aggregate	Aggregate	Diesel	1.10E-05	6.96E-05	3.75E-05	9.52E-10	2.42E-06	1.83E-06
San Mateo	2019	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Gasoline	1.48E-02	9.87E-03	4.42E-01	7.70E-06	4.35E-03	3.29E-03
San Mateo	2019	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Diesel	1.87E-05	1.18E-04	6.38E-05	1.62E-09	3.95E-06	2.99E-06
San Mateo	2019	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Gasoline	6.14E-03	3.82E-03	1.74E-01	2.82E-06	1.48E-03	1.12E-03
San Mateo	2019	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Diesel	3.97E-05	2.49E-04	2.08E-04	4.53E-09	8.75E-06	6.61E-06
San Mateo	2019	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Gasoline	3.23E-03	2.73E-03	1.11E-01	3.29E-06	1.05E-03	7.95E-04
San Mateo	2019	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Diesel	2.76E-04	1.74E-03	1.21E-03	2.79E-08	5.97E-05	4.51E-05
San Mateo	2019	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregate	Aggregate	Gasoline	5.00E-04	1.55E-03	1.92E-02	3.44E-06	2.46E-05	1.86E-05
San Mateo	2019	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Gasoline	2.74E-04	7.40E-04	1.18E-02	1.81E-06	1.28E-05	9.66E-06
San Mateo	2019	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	6.82E-06	4.31E-05	2.33E-05	5.91E-10	1.45E-06	1.09E-06
San Mateo	2019	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Gasoline	1.47E-04	1.04E-04	4.97E-03	7.93E-08	5.68E-05	4.29E-05
San Mateo	2019	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Diesel	6.36E-04	3.97E-03	3.35E-03	2.15E-07	1.41E-04	1.08E-04
San Mateo	2019	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Gasoline	4.73E-03	3.52E-03	1.60E-01	7.48E-06	1.51E-03	1.14E-03
San Mateo	2019	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Diesel	2.23E-03	1.39E-02	7.51E-03	1.92E-07	5.00E-04	3.78E-04
San Mateo	2019	Construction and Mining - Misc - Surfacing Equipment	Aggregate	Aggregate	Gasoline	7.99E-03	5.54E-03	2.10E-01	3.41E-06	2.30E-03	1.74E-03
San Mateo	2019	Construction and Mining - Misc - Tampers/Rammers	Aggregate	Aggregate	Gasoline	7.09E-04	5.46E-04	2.72E-02	4.39E-07	3.85E-04	2.91E-04
San Mateo	2019	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Gasoline	1.08E-04	2.94E-04	7.33E-03	1.15E-06	8.26E-06	6.24E-06
San Mateo	2019	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	1.99E-04	1.26E-03	6.81E-04	1.73E-08	4.31E-05	3.25E-05
San Mateo	2019	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Gasoline	5.73E-03	4.76E-03	2.02E-01	6.22E-06	1.92E-03	1.45E-03
San Mateo	2019	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Diesel	2.52E-04	1.59E-03	9.64E-04	2.34E-08	5.39E-05	4.08E-05
San Mateo	2019	Construction and Mining - Off-Highway Tractors	Aggregate	Aggregate	Diesel	5.91E-04	4.99E-03	4.02E-03	8.18E-06	2.72E-04	2.50E-04
San Mateo	2019	Construction and Mining - Off-Highway Trucks	Aggregate	Aggregate	Diesel	2.91E-03	3.28E-02	1.66E-02	4.91E-05	1.13E-03	1.04E-03
San Mateo	2019	Construction and Mining - Other	Aggregate	Aggregate	Diesel	7.78E-04	8.03E-03	4.98E-03	1.10E-05	3.99E-04	3.67E-04
San Mateo	2019	Construction and Mining - Pavers	Aggregate	Aggregate	Diesel	1.78E-04	1.86E-03	1.35E-03	2.58E-06	1.00E-04	9.20E-05
San Mateo	2019	Construction and Mining - Paving Equipment	Aggregate	Aggregate	Diesel	9.55E-05	1.02E-03	7.52E-04	1.50E-06	5.09E-05	4.69E-05
San Mateo	2019	Construction and Mining - Rollers	Aggregate	Aggregate	Diesel	5.95E-04	4.85E-03	4.54E-03	6.69E-06	2.93E-04	2.70E-04
San Mateo	2019	Construction and Mining - Rough Terrain Forklifts	Aggregate	Aggregate	Diesel	2.97E-04	3.78E-03	4.71E-03	7.27E-06	1.65E-04	1.52E-04
San Mateo	2019	Construction and Mining - Rubber Tired Dozers	Aggregate	Aggregate	Diesel	5.34E-04	5.52E-03	3.80E-03	4.29E-06	2.76E-04	2.53E-04
San Mateo	2019	Construction and Mining - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	4.31E-03	4.52E-02	2.57E-02	5.90E-05	2.02E-03	1.86E-03
San Mateo	2019	Construction and Mining - Scrapers	Aggregate	Aggregate	Diesel	2.79E-03	3.34E-02	1.98E-02	3.84E-05	1.35E-03	1.24E-03



San Mateo	2019 Construction and Mining - Skid Steer Loaders	Aggregate	Aggregate	Diesel	3.32E-04	3.98E-03	4.72E-03	7.04E-06	1.78E-04	1.64E-04
San Mateo	2019 Construction and Mining - Surfacing Equipment	Aggregate	Aggregate	Diesel	3.28E-05	4.51E-04	2.46E-04	8.08E-07	1.71E-05	1.57E-05
San Mateo	2019 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	3.82E-03	3.80E-02	3.48E-02	5.38E-05	2.26E-03	2.08E-03
San Mateo	2019 Construction and Mining - Trenchers	Aggregate	Aggregate	Diesel	2.61E-04	1.97E-03	1.51E-03	2.22E-06	1.29E-04	1.18E-04
TOTAL CONSTRUCTION OFFROAD (tons/day)					9.01E-02	3.20E-01	2.11E+00	3.91E-04	3.08E-02	2.52E-02
ESTIMATED San Mateo (tons/yr)					1.31	4.65	30.61	0.01	0.45	0.37
ESTIMATED San Mateo (lbs/day)					7	25	168	0	2	2

City and County Population: Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020; and US Census Bureau <a href="https://onthemap.ces.census.gov/">https://onthemap.ces.census.gov/</a>		<b>2019</b>
City Absolute Change Service Population Previous Year		834
County Absolute Change Service Population Previous Year		20,973
% of total County Service Population Change Attributable to City		4%

**Industrial and Light Commercial**

Region	CalYr	VehClass	MdYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd
San Mateo	2019	Industrial - Aerial Lifts	Aggregate	Aggregate	Diesel	3.35E-04	5.70E-03	7.79E-03	1.26E-05	1.13E-04	1.04E-04
San Mateo	2019	Industrial - Forklifts	Aggregate	Aggregate	Diesel	5.50E-03	4.73E-02	3.97E-02	5.29E-05	3.38E-03	3.11E-03
San Mateo	2019	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Gasoline	3.09E-03	2.80E-03	1.11E-01	9.05E-06	8.13E-04	6.14E-04
San Mateo	2019	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Diesel	1.65E-04	1.04E-03	6.69E-04	1.59E-08	3.95E-05	2.98E-05
San Mateo	2019	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Electric	3.88E-05	3.01E-04	1.10E-02	2.34E-08	2.95E-05	2.23E-05
San Mateo	2019	Industrial - Misc - Forklifts	Aggregate	Aggregate	Gasoline	2.53E-02	1.14E-01	2.81E+00	2.51E-04	1.74E-03	1.32E-03
San Mateo	2019	Industrial - Misc - Forklifts	Aggregate	Aggregate	Electric	7.22E-06	3.20E-05	1.15E-03	2.59E-09	3.54E-06	2.67E-06
San Mateo	2019	Industrial - Misc - Forklifts	Aggregate	Aggregate	Nat Gas	0.00E+00	1.75E-01	1.62E+00	0.00E+00	3.55E-03	0.00E+00
San Mateo	2019	Industrial - Misc - Other General Industrial Equipment	Aggregate	Aggregate	Gasoline	1.32E-03	1.68E-03	1.05E-01	4.88E-06	2.73E-05	2.07E-05
San Mateo	2019	Industrial - Misc - Other General Industrial Equipment	Aggregate	Aggregate	Diesel	1.28E-04	8.31E-04	5.17E-04	1.23E-08	2.83E-05	2.14E-05
San Mateo	2019	Industrial - Misc - Other Material Handling Equipment	Aggregate	Aggregate	Gasoline	2.22E-04	9.78E-04	1.00E-02	1.98E-06	1.42E-05	1.08E-05
San Mateo	2019	Industrial - Misc - Sweepers/Scrubbers	Aggregate	Aggregate	Gasoline	1.76E-03	4.70E-03	1.51E-01	1.62E-05	1.01E-04	7.66E-05
San Mateo	2019	Industrial - Misc - Sweepers/Scrubbers	Aggregate	Aggregate	Diesel	3.10E-05	2.05E-04	1.37E-04	3.15E-09	7.02E-06	5.31E-06
San Mateo	2019	Industrial - Other General Industrial Equipment	Aggregate	Aggregate	Diesel	2.46E-03	1.82E-02	1.58E-02	2.55E-05	1.10E-03	1.01E-03
San Mateo	2019	Industrial - Other Material Handling Equipment	Aggregate	Aggregate	Diesel	9.81E-04	1.04E-02	7.07E-03	1.50E-05	4.79E-04	4.41E-04
San Mateo	2019	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Gasoline	7.44E-02	4.83E-02	4.08E+00	1.56E-04	3.66E-04	3.88E-04
San Mateo	2019	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Diesel	1.20E-03	6.24E-03	6.99E-03	1.01E-05	3.63E-04	3.39E-04
San Mateo	2019	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Light Commercial - Misc - Gas Compressors	Aggregate	Aggregate	Nat Gas	0.00E+00	1.96E-02	2.29E-01	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Gasoline	2.09E-01	8.54E-02	5.98E+00	2.59E-04	9.92E-04	1.15E-03
San Mateo	2019	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Diesel	3.68E-03	2.50E-02	2.09E-02	3.85E-05	1.08E-03	1.13E-03
San Mateo	2019	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Nat Gas	0.00E+00	7.72E-04	5.71E-03	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Gasoline	5.25E-02	2.28E-02	2.94E+00	1.02E-04	1.69E-04	2.22E-04
San Mateo	2019	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Diesel	1.58E-05	1.25E-04	9.93E-05	1.94E-07	4.88E-06	5.24E-06
San Mateo	2019	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Gasoline	1.72E-02	1.06E-02	6.28E-01	3.98E-05	1.77E-04	1.58E-04
San Mateo	2019	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Diesel	2.23E-03	1.40E-02	1.23E-02	2.17E-05	6.39E-04	6.59E-04
San Mateo	2019	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Light Commercial - Misc - Welders	Aggregate	Aggregate	Gasoline	3.75E-02	2.06E-02	1.79E+00	7.52E-05	2.58E-04	2.56E-04
San Mateo	2019	Light Commercial - Misc - Welders	Aggregate	Aggregate	Diesel	5.63E-03	3.09E-02	3.20E-02	4.97E-05	1.68E-03	1.61E-03
San Mateo	2019	Light Commercial - Misc - Welders	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TOTAL LIGHT COMMERCIAL + INDUSTRIAL OFFROAD (tons/day)						0.445	0.667	20.631	0.001	0.017	0.013
ESTIMATED San Mateo (tons/yr)						22.65	33.98	1050.47	0.06	0.87	0.65
ESTIMATED San Mateo (lbs/day)						124	186	5756	0	5	4

**EMPLOYMENT:**
<https://labormarketinfo.edd.ca.gov/cgi/dataanalysis/labForceReport.asp?menuchoice=LABFORCE>
**2019**

Employment in San Mateo County	447,600
Employment in San Mateo	62,440
Percent in the City	14%

## Lawn and Garden

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2_5_tpd
San Mateo	2019	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Gasoline	1.67E-01	5.29E-03	4.91E-01	3.72E-05	2.17E-03	1.64E-03
San Mateo	2019	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Gasoline	1.45E-01	5.00E-03	2.64E-01	2.18E-05	1.17E-03	8.85E-04
San Mateo	2019	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Gasoline	2.31E-04	8.63E-05	1.10E-02	4.03E-07	9.28E-07	7.02E-07
San Mateo	2019	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Diesel	3.41E-06	2.15E-05	1.16E-05	2.70E-08	7.24E-07	5.47E-07
San Mateo	2019	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Gasoline	5.59E-02	2.94E-02	2.25E+00	9.79E-05	1.61E-03	1.22E-03
San Mateo	2019	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Gasoline	2.77E-01	9.84E-03	1.41E+00	9.70E-05	4.05E-03	3.06E-03
San Mateo	2019	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Gasoline	9.43E-04	3.88E-04	5.09E-02	1.93E-06	4.45E-06	3.37E-06
San Mateo	2019	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Diesel	1.50E-06	1.04E-05	8.27E-06	1.35E-08	3.62E-07	2.74E-07
San Mateo	2019	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Gasoline	1.12E-01	5.28E-02	5.09E+00	1.76E-04	7.36E-04	5.56E-04
San Mateo	2019	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Diesel	1.31E-03	8.53E-03	5.29E-03	1.08E-05	2.93E-04	2.21E-04
San Mateo	2019	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Gasoline	3.36E-04	1.67E-04	1.98E-02	6.77E-07	1.96E-06	1.49E-06
San Mateo	2019	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Gasoline	2.18E-03	3.67E-04	4.13E-02	1.86E-06	7.03E-06	5.31E-06
San Mateo	2019	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Gasoline	1.79E-01	1.11E-02	1.11E+00	7.38E-05	1.56E-03	1.18E-03
San Mateo	2019	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Electric	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
San Mateo	2019	Lawn and Garden - Misc - Wood Splitters	Aggregate	Aggregate	Gasoline	1.18E-02	4.79E-03	4.40E-01	1.68E-05	7.08E-05	5.34E-05
TOTAL LAWN & GARDEN (tons/day)						0.95	0.13	11.17	0.00	0.01	0.01
ESTIMATED San Mateo (tons/yr)						47.18	6.33	553.08	0.03	0.58	0.44
ESTIMATED San Mateo (lbs/day)						259	35	3031	0	3	2

City and County Population: Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020; and US Census Bureau <a href="https://onthemap.ces.census.gov/">https://onthemap.ces.census.gov/</a>			<b>2019</b>
County Jurisdiction Population			771,160
City Jurisdiction Population			104,599
City % Total Population in County			<b>13.6%</b>

## San Mateo — TRANSPORTATION SECTOR (Criteria Air Pollutants)

Source: EMFAC2021 V.1.0.2., Web Database - Emission Rates. San Mateo County. Based on the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) Global Warming Potentials (GWPs); Kittelson and Associates, Inc. 2023.

Criteria Air Pollutants						
	lbs/day					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Existing EIR Study Area	260	1,940	9,116	32	203	85
Existing in Year 2040 EIR Study Area	71	352	4,097	23	182	61
Proposed 2040 EIR Study Area	92	459	5,341	30	237	80
Change from Existing Conditions (2019-2040)	-168	-1,480	-3,775	-2	34	-5
Change from Existing Land Uses (2040 Emission Rates)	-190	-1,587	-5,020	-9	-21	-23

	Tons/year					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Existing EIR Study Area	45	337	1,582	6	35	15
Existing in Year 2040 EIR Study Area	12	61	711	4	32	11
Proposed 2040 EIR Study Area	16	80	927	5	41	14
Change from Existing Conditions (2019-2040)	-29	-257	-655	0	6	-1
Change from Existing Land Uses (2040 Emission Rates)	-4	-19	-216	-1	-10	-3

Notes:

<sup>1</sup> lbs to Tons 2000

<sup>2</sup> MTons = metric tons; CO<sub>2</sub>e = carbon dioxide-equivalent.

City of San Mateo VMT

Source: Kittelson & Associates, Inc. 2023.

	Daily VMT			Total Daily VMT	Total with RTAC	Service Population	VMT/SP	VMT/SP w RTAC
Scenario	IX	XI	II					
ExistingYear (Year 2019)	1,656,534	2,096,050	165,637	3,918,221	2,041,929	170,460	23.0	12.0
GP Update (Year 2040)	2,231,799	2,656,020	221,043	5,108,862	2,664,953	239,400	21.3	11.1

Notes: Total may not add to 100% due to rounding.

IX = Internal-External

XI = External- Internal

II = Internal-Internal

Daily VMT and Fleet Mix Percentage				
	Existing Year (Year 2019)		GP Update (Year 2040)	
	Daily VMT	Percent	Daily VMT	Percent
	Passenger Vehicles	3,752,639	96%	4,899,852
Trucks	165,761	4%	209,010	4%

Modeling of vehicle miles traveled (VMT) provided by Kittelson & Associates Inc., 2023. VMT from passenger vehicles and trucks that have an origin or destination in the City using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375). For accounting purposes, there are three types of trips:

- » Vehicle trips that originated and terminated within the City (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips, and their emissions, are attributed to the City.
- » Vehicle trips that either originated or terminated (but not both) within the City (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for these trips is attributed to the City.
- » Vehicle trips that neither originated nor terminated within the City. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not counted towards the City's VMT or emissions.

## Year 2019 Existing: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2, PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2023.

	Trucks	Passenger Vehicles
<b>Fleet Mix - San Mateo (K)</b>	<b>4%</b>	<b>96%</b>
Passenger Vehicles	Trucks	EMFAC default
94.98%	5.02%	

Daily VMT		3,918,221		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.37%	0.37%	2.89	43.68	8.07	0.36	2.93	1.63
All Other Buses	Natural Gas	0.00%	0.00%	0.00	0.12	1.28	0.00	0.02	0.01
LDA	Gasoline	52.42%	52.86%	69.31	311.65	4,092.60	13.24	74.17	26.46
LDA	Diesel	0.18%	0.18%	0.54	5.04	5.79	0.04	0.57	0.39
LDA	Electricity	2.14%	2.16%	0.00	0.00	0.00	0.00	2.29	0.65
LDA	Plug-in Hybrid	1.17%	1.18%	0.15	0.35	22.09	0.15	1.28	0.42
LDT1	Gasoline	4.32%	4.35%	17.02	77.07	728.05	1.29	7.02	2.69
LDT1	Diesel	0.00%	0.00%	0.03	0.16	0.17	0.00	0.03	0.02
LDT1	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.01	0.00
LDT1	Plug-in Hybrid	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT2	Gasoline	21.36%	21.54%	31.04	195.78	1,865.39	6.77	32.41	11.57
LDT2	Diesel	0.08%	0.08%	0.12	0.49	1.02	0.02	0.17	0.08
LDT2	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.01	0.00
LDT2	Plug-in Hybrid	0.05%	0.05%	0.01	0.02	0.97	0.01	0.06	0.02
LHD1	Gasoline	1.95%	1.64%	9.99	40.14	242.07	1.55	14.79	5.23
LHD1	Diesel	0.64%	0.54%	13.75	164.32	41.48	0.34	8.15	4.70
LHD2	Gasoline	0.22%	0.18%	1.10	5.27	25.75	0.19	1.88	0.66
LHD2	Diesel	0.26%	0.22%	4.53	45.88	12.39	0.17	3.32	1.75
MCY	Gasoline	0.33%	0.33%	40.94	19.94	468.17	0.05	0.51	0.20
MDV	Gasoline	11.83%	11.93%	27.06	155.36	1,247.10	4.51	18.16	6.54
MDV	Diesel	0.20%	0.21%	0.22	1.18	3.44	0.07	0.39	0.19
MDV	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
MDV	Plug-in Hybrid	0.06%	0.06%	0.01	0.02	1.21	0.01	0.07	0.02
MH	Gasoline	0.03%	0.03%	0.63	2.65	18.15	0.06	0.18	0.06
MH	Diesel	0.01%	0.01%	0.15	5.24	0.49	0.01	0.20	0.14
Motor Coach	Diesel	0.05%	0.05%	0.82	19.97	2.87	0.08	0.92	0.62
OBUS	Gasoline	0.10%	0.10%	0.60	3.96	13.63	0.16	0.52	0.17
PTO	Diesel	0.03%	0.02%	0.77	14.20	2.88	0.05	0.26	0.25
SBUS	Gasoline	0.02%	0.02%	0.67	2.85	16.50	0.01	0.09	0.03
SBUS	Diesel	0.02%	0.02%	0.15	11.49	0.43	0.02	0.17	0.09
SBUS	Natural Gas	0.00%	0.00%	0.00	0.04	0.85	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.01	0.14	0.02	0.00	0.01	0.01
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.01	0.14	0.02	0.00	0.01	0.01
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.02	0.48	0.07	0.00	0.03	0.02
T6 CAIRP Class 7	Diesel	0.02%	0.01%	0.12	3.19	0.41	0.01	0.17	0.12
T6 Instate Delivery Class 4	Diesel	0.07%	0.06%	3.51	44.48	9.21	0.07	1.77	1.47
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.01	0.06	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.06%	0.05%	1.22	17.62	3.30	0.06	0.77	0.55
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.07	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.12%	0.10%	4.03	51.51	10.60	0.12	2.23	1.76
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.10	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.05%	0.04%	1.06	16.60	2.78	0.05	0.68	0.51
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.19	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.09%	0.08%	3.93	61.21	11.07	0.09	2.46	2.07
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.06	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.24%	0.20%	3.34	58.49	9.94	0.23	2.86	2.00
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.02	0.29	0.00	0.01	0.00
T6 Instate Other Class 6	Diesel	0.15%	0.13%	3.51	56.66	10.18	0.14	2.58	2.00
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.15	0.00	0.00	0.00
T6 Instate Other Class 7	Diesel	0.07%	0.06%	1.24	21.27	3.43	0.07	1.02	0.75
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.02	0.32	0.00	0.01	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.06	0.93	0.17	0.00	0.04	0.03
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.02%	0.02%	0.25	5.98	0.77	0.02	0.24	0.16
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.08	0.01	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.08	0.01	0.00	0.01	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.01	0.27	0.04	0.00	0.02	0.01

## Year 2019 Existing: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2, PL Emission Rates, San Mateo County

<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2023.

	Trucks	Passenger Vehicles
<b>Fleet Mix - San Mateo (K)</b>	<b>4%</b>	<b>96%</b>
Passenger Vehicles	Trucks	EMFAC default
94.98%	5.02%	

Daily VMT		3,918,221		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
T6 OOS Class 7	Diesel	0.01%	0.01%	0.09	2.17	0.29	0.01	0.12	0.08
T6 Public Class 4	Diesel	0.01%	0.01%	0.06	4.89	0.15	0.01	0.06	0.03
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.02%	0.02%	0.11	6.84	0.31	0.02	0.14	0.07
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.02	0.46	0.00	0.01	0.00
T6 Public Class 6	Diesel	0.01%	0.01%	0.14	9.58	0.33	0.01	0.13	0.08
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.09	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.04%	0.03%	0.46	30.63	0.96	0.04	0.39	0.26
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.43	0.00	0.01	0.00
T6 Utility Class 5	Diesel	0.00%	0.00%	0.00	0.21	0.02	0.00	0.01	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.07	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.08	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.24%	0.20%	4.40	23.67	98.27	0.38	1.21	0.42
T7 CAIRP Class 8	Diesel	0.09%	0.08%	0.71	29.00	2.63	0.12	1.46	0.81
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.06	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.11%	0.09%	1.40	37.07	5.52	0.15	2.16	1.36
T7 NOOS Class 8	Diesel	0.04%	0.03%	0.36	13.11	1.31	0.05	0.66	0.37
T7 Other Port Class 8	Diesel	0.01%	0.01%	0.08	2.96	0.25	0.01	0.11	0.05
T7 POAK Class 8	Diesel	0.03%	0.02%	0.37	12.32	1.16	0.04	0.43	0.20
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.06	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.08%	0.07%	1.12	83.11	3.62	0.13	1.65	0.88
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.02	0.28	0.00	0.00	0.00
T7 Single Concrete/Transit MDiesel		0.02%	0.02%	0.03	1.89	0.15	0.03	0.23	0.09
T7 Single Concrete/Transit MNatural Gas		0.00%	0.00%	0.00	0.04	0.71	0.00	0.01	0.00
T7 Single Dump Class 8	Diesel	0.06%	0.05%	0.86	25.02	3.00	0.08	1.12	0.66
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.00	0.11	1.90	0.00	0.03	0.01
T7 Single Other Class 8	Diesel	0.06%	0.05%	0.81	22.34	2.99	0.08	1.14	0.68
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	0.00	0.13	2.37	0.00	0.04	0.01
T7 SWCV Class 8	Diesel	0.06%	0.05%	0.23	43.20	0.63	0.20	1.34	0.48
T7 SWCV Class 8	Natural Gas	0.03%	0.03%	0.47	9.24	72.54	0.00	0.69	0.24
T7 Tractor Class 8	Diesel	0.08%	0.07%	1.02	33.56	3.71	0.10	1.43	0.84
T7 Tractor Class 8	Natural Gas	0.01%	0.01%	0.01	0.32	5.58	0.00	0.07	0.02
T7 Utility Class 8	Diesel	0.00%	0.00%	0.01	0.33	0.03	0.00	0.02	0.01
T7IS	Gasoline	0.00%	0.00%	0.39	1.72	14.41	0.01	0.04	0.01
UBUS	Gasoline	0.02%	0.02%	0.02	0.11	1.17	0.02	0.21	0.07
UBUS	Diesel	0.17%	0.17%	2.37	79.65	4.57	0.21	2.22	0.81
UBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
		100%	100%	260	1,940	9,116	32	203	85



## Existing inYear 2040: Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2. PL Emission Rates. San Mateo County

<sup>1</sup> Based on data provided Kittelson & Associates Inc., 2023.

Fleet Mix - San Mateo (K)		4%	96%
Trucks	Passenger Vehicles		
Passenger Vehicles	Trucks	93%	7%
		EMFAC default	

Daily VMT		3,918,221		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.35%	0.36%	0.40	15.12	2.46	0.29	1.87	0.68
All Other Buses	Natural Gas	0.01%	0.01%	0.01	0.04	1.91	0.00	0.03	0.01
LDA	Gasoline	29.61%	30.62%	7.29	49.87	1,100.86	5.68	39.29	12.50
LDA	Diesel	0.02%	0.02%	0.01	0.04	0.23	0.00	0.03	0.01
LDA	Electricity	4.45%	4.60%	0.00	0.00	0.00	0.00	4.76	1.36
LDA	Plug-in Hybrid	1.43%	1.48%	0.14	0.33	20.73	0.14	1.50	0.44
LDT1	Gasoline	3.58%	3.70%	1.13	7.30	149.75	0.80	5.22	1.69
LDT1	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Electricity	0.11%	0.12%	0.00	0.00	0.00	0.00	0.12	0.03
LDT1	Plug-in Hybrid	0.08%	0.08%	0.01	0.02	1.13	0.01	0.08	0.02
LDT2	Gasoline	30.90%	31.95%	10.91	63.88	1,384.97	7.14	44.74	14.38
LDT2	Diesel	0.12%	0.12%	0.12	0.28	1.27	0.02	0.21	0.09
LDT2	Electricity	0.91%	0.94%	0.00	0.00	0.00	0.00	0.97	0.28
LDT2	Plug-in Hybrid	0.82%	0.85%	0.08	0.19	11.86	0.08	0.86	0.25
LHD1	Gasoline	1.56%	0.88%	0.54	2.55	79.70	1.00	11.74	4.10
LHD1	Diesel	0.94%	0.53%	7.06	20.87	17.72	0.46	8.75	3.85
LHD1	Electricity	1.49%	0.84%	0.00	0.00	0.00	0.00	6.05	2.01
LHD2	Gasoline	0.17%	0.10%	0.05	0.33	8.89	0.13	1.50	0.52
LHD2	Diesel	0.43%	0.24%	3.76	11.49	9.51	0.25	4.62	2.04
LHD2	Electricity	0.36%	0.20%	0.00	0.00	0.00	0.00	1.65	0.55
MCV	Gasoline	0.47%	0.49%	30.42	18.62	380.65	0.07	0.74	0.29
MDV	Gasoline	17.94%	18.55%	6.54	38.54	821.19	5.02	26.14	8.41
MDV	Diesel	0.19%	0.20%	0.07	0.16	2.29	0.05	0.29	0.10
MDV	Electricity	0.83%	0.86%	0.00	0.00	0.00	0.00	0.89	0.25
MDV	Plug-in Hybrid	0.52%	0.54%	0.05	0.12	7.53	0.05	0.55	0.16
MH	Gasoline	0.05%	0.05%	0.05	0.46	0.70	0.08	0.26	0.09
MH	Diesel	0.03%	0.03%	0.18	5.72	0.53	0.02	0.19	0.09
Motor Coach	Diesel	0.05%	0.05%	0.05	4.47	0.17	0.07	0.53	0.25
OBUS	Gasoline	0.03%	0.03%	0.05	0.31	0.93	0.04	0.15	0.05
OBUS	Electricity	0.02%	0.03%	0.00	0.00	0.00	0.00	0.07	0.02
PTO	Diesel	0.02%	0.01%	0.03	4.94	0.36	0.03	0.01	0.01
PTO	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.02%	0.01	0.15	0.31	0.01	0.09	0.03
SBUS	Diesel	0.01%	0.01%	0.02	0.87	0.09	0.01	0.07	0.03
SBUS	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00	0.04	0.01
SBUS	Natural Gas	0.00%	0.00%	0.00	0.02	0.63	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.01	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.02%	0.01%	0.01	0.26	0.04	0.01	0.08	0.03
T6 CAIRP Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Instate Delivery Class 4	Diesel	0.05%	0.03%	0.04	1.79	0.25	0.04	0.25	0.09
T6 Instate Delivery Class 4	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.10	0.03
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.19	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.04%	0.02%	0.02	1.37	0.19	0.03	0.20	0.07
T6 Instate Delivery Class 5	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.09	0.03
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.15	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.08%	0.04%	0.05	2.90	0.39	0.07	0.42	0.15
T6 Instate Delivery Class 6	Electricity	0.06%	0.03%	0.00	0.00	0.00	0.00	0.18	0.06
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.31	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.04%	0.02%	0.03	2.56	0.26	0.04	0.21	0.08
T6 Instate Delivery Class 7	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.05	0.01
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.29	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.06%	0.04%	0.04	1.81	0.26	0.05	0.33	0.12
T6 Instate Other Class 4	Electricity	0.05%	0.03%	0.00	0.00	0.00	0.00	0.14	0.04
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.18	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.16%	0.09%	0.08	4.24	0.62	0.14	0.83	0.30

# Existing inYear 2040: Criteria Air Pollutants

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Trucks	Passenger Vehicles		
Passenger Vehicles	Trucks	EMFAC default	
93%	7%		

Daily VMT		3,918,221	lbs/day						
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
T6 Instate Other Class 5	Electricity	0.12%	0.07%	0.00	0.00	0.00	0.00	0.37	0.12
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.46	0.00	0.01	0.00
T6 Instate Other Class 6	Diesel	0.10%	0.06%	0.05	2.77	0.40	0.09	0.53	0.19
T6 Instate Other Class 6	Electricity	0.08%	0.04%	0.00	0.00	0.00	0.00	0.23	0.07
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.29	0.00	0.01	0.00
T6 Instate Other Class 7	Diesel	0.06%	0.03%	0.04	2.64	0.28	0.05	0.30	0.11
T6 Instate Other Class 7	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.09	0.03
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.29	0.00	0.01	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.05	0.01	0.00	0.01	0.00
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.02%	0.01%	0.01	1.07	0.10	0.02	0.11	0.04
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.10	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.01	0.00
T6 OOS Class 7	Diesel	0.01%	0.01%	0.01	0.25	0.03	0.01	0.06	0.03
T6 Public Class 4	Diesel	0.00%	0.00%	0.01	0.40	0.03	0.00	0.02	0.01
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.01%	0.01%	0.02	0.96	0.08	0.01	0.07	0.03
T6 Public Class 5	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.02	0.01
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.30	0.00	0.01	0.00
T6 Public Class 6	Diesel	0.01%	0.00%	0.01	0.68	0.05	0.01	0.04	0.02
T6 Public Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.15	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.02%	0.01%	0.03	1.69	0.13	0.02	0.13	0.05
T6 Public Class 7	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.04	0.01
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.47	0.00	0.01	0.00
T6 Utility Class 5	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.17%	0.09%	0.18	1.18	2.95	0.22	0.84	0.29
T6TS	Electricity	0.14%	0.08%	0.00	0.00	0.00	0.00	0.40	0.13
T7 CAIRP Class 8	Diesel	0.09%	0.05%	0.09	9.96	0.32	0.10	1.21	0.54
T7 CAIRP Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.17	0.05
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.14%	0.08%	0.14	16.45	0.47	0.14	1.82	0.81
T7 NOOS Class 8	Diesel	0.05%	0.03%	0.05	6.15	0.18	0.05	0.67	0.30
T7 Other Port Class 8	Diesel	0.01%	0.01%	0.01	1.07	0.06	0.01	0.13	0.05
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.02	0.01
T7 POAK Class 8	Diesel	0.03%	0.02%	0.03	3.65	0.18	0.04	0.41	0.16
T7 POAK Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.05	0.01
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.05%	0.03%	0.18	13.12	0.80	0.07	0.73	0.28
T7 Public Class 8	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.19	0.06
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.01	0.29	0.00	0.01	0.00
T7 Single Concrete/Transit Mix	Diesel	0.01%	0.01%	0.01	0.67	0.04	0.01	0.11	0.04
T7 Single Concrete/Transit Mix	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.07	0.02
T7 Single Concrete/Transit Mix	Natural Gas	0.00%	0.00%	0.00	0.01	0.20	0.00	0.01	0.00
T7 Single Dump Class 8	Diesel	0.04%	0.02%	0.03	3.73	0.20	0.05	0.44	0.18
T7 Single Dump Class 8	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.15	0.05
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.00	0.04	0.91	0.00	0.02	0.01

## Existing inYear 2040: Criteria Air Pollutants

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Fleet Mix - San Mateo (K)		Trucks	Passenger Vehicles
		4%	96%
Passenger Vehicles	Trucks	EMFAC default	
93%	7%		

Daily VMT		3,918,221	lbs/day						
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
T7 Single Other Class 8	Diesel	0.05%	0.03%	0.05	5.35	0.28	0.06	0.61	0.25
T7 Single Other Class 8	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.19	0.06
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	0.00	0.07	1.42	0.00	0.03	0.01
T7 SWCV Class 8	Diesel	0.01%	0.01%	0.04	6.37	0.10	0.03	0.23	0.08
T7 SWCV Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.31	0.10
T7 SWCV Class 8	Natural Gas	0.05%	0.03%	0.09	2.09	51.08	0.00	1.11	0.38
T7 Tractor Class 8	Diesel	0.09%	0.05%	0.08	9.28	0.38	0.09	1.08	0.45
T7 Tractor Class 8	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.10	0.03
T7 Tractor Class 8	Natural Gas	0.01%	0.00%	0.01	0.14	3.01	0.00	0.08	0.03
T7 Utility Class 8	Diesel	0.00%	0.00%	0.00	0.09	0.01	0.00	0.01	0.00
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7IS	Gasoline	0.00%	0.00%	0.03	0.16	1.89	0.00	0.01	0.00
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.02%	0.01	0.03	1.02	0.01	0.18	0.06
UBUS	Diesel	0.01%	0.01%	0.06	0.34	0.07	0.01	0.14	0.05
UBUS	Electricity	0.14%	0.15%	0.00	0.00	0.00	0.00	1.07	0.34
UBUS	Natural Gas	0.00%	0.00%	0.02	0.02	17.87	0.00	0.05	0.02
		100%	100%	70.58	352.29	4096.56	22.96	181.74	61.28

## Year 2040: GP 2040 Update Criteria Air Pollutants

Source: EMFAC2021 Version 1.0.2. PL Emission Rates. San Mateo County

<sup>1</sup> Based on data provided Kittelson & Associates Inc., 2023.

Fleet Mix - San Mateo (K)		4%	96%
Trucks	Passenger Vehicles		
Passenger Vehicles	Trucks	EMFAC default	
93%	7%		

Daily VMT		5,108,862	lbs/day						
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.35%	0.36%	0.53	19.71	3.20	0.38	2.43	0.89
All Other Buses	Natural Gas	0.01%	0.01%	0.01	0.06	2.49	0.00	0.04	0.02
LDA	Gasoline	29.61%	30.62%	9.51	65.02	1,435.38	7.40	51.23	16.30
LDA	Diesel	0.02%	0.02%	0.01	0.05	0.30	0.00	0.04	0.01
LDA	Electricity	4.45%	4.60%	0.00	0.00	0.00	0.00	6.20	1.77
LDA	Plug-in Hybrid	1.43%	1.48%	0.18	0.43	27.03	0.18	1.95	0.58
LDT1	Gasoline	3.58%	3.70%	1.47	9.52	195.26	1.04	6.81	2.20
LDT1	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Electricity	0.11%	0.12%	0.00	0.00	0.00	0.00	0.16	0.05
LDT1	Plug-in Hybrid	0.08%	0.08%	0.01	0.02	1.48	0.01	0.11	0.03
LDT2	Gasoline	30.90%	31.95%	14.22	83.29	1,805.83	9.31	58.34	18.75
LDT2	Diesel	0.12%	0.12%	0.16	0.36	1.66	0.03	0.27	0.12
LDT2	Electricity	0.91%	0.94%	0.00	0.00	0.00	0.00	1.27	0.36
LDT2	Plug-in Hybrid	0.82%	0.85%	0.10	0.25	15.46	0.10	1.12	0.33
LHD1	Gasoline	1.56%	0.88%	0.70	3.32	103.91	1.31	15.31	5.35
LHD1	Diesel	0.94%	0.53%	9.20	27.21	23.10	0.60	11.41	5.02
LHD1	Electricity	1.49%	0.84%	0.00	0.00	0.00	0.00	7.89	2.63
LHD2	Gasoline	0.17%	0.10%	0.07	0.44	11.59	0.16	1.95	0.68
LHD2	Diesel	0.43%	0.24%	4.90	14.98	12.39	0.32	6.02	2.67
LHD2	Electricity	0.36%	0.20%	0.00	0.00	0.00	0.00	2.16	0.72
MCY	Gasoline	0.47%	0.49%	39.67	24.28	496.32	0.10	0.96	0.38
MDV	Gasoline	17.94%	18.55%	8.53	50.25	1,070.73	6.55	34.08	10.97
MDV	Diesel	0.19%	0.20%	0.10	0.21	2.98	0.07	0.38	0.13
MDV	Electricity	0.83%	0.86%	0.00	0.00	0.00	0.00	1.16	0.33
MDV	Plug-in Hybrid	0.52%	0.54%	0.07	0.16	9.81	0.06	0.71	0.21
MH	Gasoline	0.05%	0.05%	0.07	0.60	0.92	0.11	0.34	0.12
MH	Diesel	0.03%	0.03%	0.24	7.46	0.69	0.03	0.25	0.12
Motor Coach	Diesel	0.05%	0.05%	0.06	5.83	0.22	0.09	0.69	0.32
OBUS	Gasoline	0.03%	0.03%	0.06	0.40	1.21	0.05	0.20	0.07
OBUS	Electricity	0.02%	0.03%	0.00	0.00	0.00	0.00	0.10	0.03
PTO	Diesel	0.02%	0.01%	0.04	6.44	0.47	0.04	0.01	0.01
PTO	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.02%	0.02	0.19	0.40	0.02	0.12	0.04
SBUS	Diesel	0.01%	0.01%	0.03	1.13	0.12	0.02	0.09	0.04
SBUS	Electricity	0.02%	0.02%	0.00	0.00	0.00	0.00	0.06	0.02
SBUS	Natural Gas	0.00%	0.00%	0.00	0.03	0.82	0.00	0.01	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.01	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 CAIRP Class 7	Diesel	0.02%	0.01%	0.01	0.34	0.05	0.01	0.10	0.04
T6 CAIRP Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.02	0.00
T6 Instate Delivery Class 4	Diesel	0.05%	0.03%	0.05	2.33	0.33	0.05	0.33	0.12
T6 Instate Delivery Class 4	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.14	0.04
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.25	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.04%	0.02%	0.03	1.78	0.25	0.04	0.27	0.09
T6 Instate Delivery Class 5	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.11	0.04
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.19	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.08%	0.04%	0.06	3.78	0.51	0.09	0.55	0.19
T6 Instate Delivery Class 6	Electricity	0.06%	0.03%	0.00	0.00	0.00	0.00	0.23	0.07
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.40	0.00	0.01	0.00
T6 Instate Delivery Class 7	Diesel	0.04%	0.02%	0.04	3.34	0.34	0.05	0.28	0.10
T6 Instate Delivery Class 7	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.06	0.02
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.02	0.38	0.00	0.01	0.00
T6 Instate Other Class 4	Diesel	0.06%	0.04%	0.05	2.35	0.34	0.07	0.43	0.16
T6 Instate Other Class 4	Electricity	0.05%	0.03%	0.00	0.00	0.00	0.00	0.19	0.06
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.24	0.00	0.01	0.00
T6 Instate Other Class 5	Diesel	0.16%	0.09%	0.11	5.53	0.80	0.18	1.09	0.40

## Year 2040: GP 2040 Update Criteria Air Pollutants

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<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2023.

Fleet Mix - San Mateo (K)		4%	96%
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Passenger Vehicles	Trucks	EMFAC default	
93%	7%		

Daily VMT		5,108,862	lbs/day						
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
T6 Instate Other Class 5	Electricity	0.12%	0.07%	0.00	0.00	0.00	0.00	0.48	0.15
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.60	0.00	0.01	0.00
T6 Instate Other Class 6	Diesel	0.10%	0.06%	0.07	3.61	0.52	0.11	0.69	0.25
T6 Instate Other Class 6	Electricity	0.08%	0.04%	0.00	0.00	0.00	0.00	0.30	0.10
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.01	0.38	0.00	0.01	0.00
T6 Instate Other Class 7	Diesel	0.06%	0.03%	0.05	3.44	0.36	0.06	0.39	0.14
T6 Instate Other Class 7	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.11	0.04
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.02	0.38	0.00	0.01	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.06	0.01	0.00	0.01	0.00
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.02%	0.01%	0.02	1.40	0.14	0.02	0.14	0.05
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.13	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.04	0.01	0.00	0.01	0.00
T6 OOS Class 7	Diesel	0.01%	0.01%	0.01	0.33	0.04	0.01	0.08	0.03
T6 Public Class 4	Diesel	0.00%	0.00%	0.01	0.52	0.04	0.00	0.03	0.01
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.10	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.01%	0.01%	0.03	1.25	0.11	0.02	0.10	0.04
T6 Public Class 5	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.03	0.01
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.01	0.40	0.00	0.01	0.00
T6 Public Class 6	Diesel	0.01%	0.00%	0.02	0.88	0.07	0.01	0.06	0.02
T6 Public Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.02	0.01
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.20	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.02%	0.01%	0.04	2.21	0.16	0.03	0.16	0.06
T6 Public Class 7	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.05	0.01
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.01	0.61	0.00	0.01	0.00
T6 Utility Class 5	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.01	0.00
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.17%	0.09%	0.24	1.54	3.85	0.29	1.09	0.38
T6TS	Electricity	0.14%	0.08%	0.00	0.00	0.00	0.00	0.53	0.17
T7 CAIRP Class 8	Diesel	0.09%	0.05%	0.12	12.99	0.42	0.13	1.58	0.71
T7 CAIRP Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.22	0.07
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.06	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.14%	0.08%	0.18	21.45	0.61	0.19	2.37	1.06
T7 NOOS Class 8	Diesel	0.05%	0.03%	0.07	8.01	0.23	0.07	0.87	0.39
T7 Other Port Class 8	Diesel	0.01%	0.01%	0.01	1.40	0.07	0.01	0.17	0.07
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.02	0.01
T7 POAK Class 8	Diesel	0.03%	0.02%	0.04	4.76	0.24	0.05	0.54	0.21
T7 POAK Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.06	0.02
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.05%	0.03%	0.23	17.11	1.04	0.10	0.96	0.36
T7 Public Class 8	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.24	0.08
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.01	0.38	0.00	0.01	0.00
T7 Single Concrete/Transit Mix	Diesel	0.01%	0.01%	0.01	0.87	0.05	0.01	0.14	0.06
T7 Single Concrete/Transit Mix	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.09	0.03
T7 Single Concrete/Transit Mix	Natural Gas	0.00%	0.00%	0.00	0.01	0.26	0.00	0.01	0.00
T7 Single Dump Class 8	Diesel	0.04%	0.02%	0.05	4.86	0.26	0.06	0.58	0.23
T7 Single Dump Class 8	Electricity	0.02%	0.01%	0.00	0.00	0.00	0.00	0.20	0.06
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.00	0.05	1.19	0.00	0.03	0.01

## Year 2040: GP 2040 Update Criteria Air Pollutants

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<sup>1</sup>: Based on data provided Kittelson & Associates Inc., 2023.

Fleet Mix - San Mateo (K)		Trucks	Passenger Vehicles
		4%	96%
Passenger Vehicles	Trucks	EMFAC default	
93%	7%		

Daily VMT		5,108,862	lbs/day						
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent for San Mateo	ROG	NOx	CO	SOx	PM10	PM2.5
T7 Single Other Class 8	Diesel	0.05%	0.03%	0.07	6.97	0.37	0.08	0.79	0.32
T7 Single Other Class 8	Electricity	0.03%	0.02%	0.00	0.00	0.00	0.00	0.25	0.08
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	0.01	0.09	1.85	0.00	0.05	0.01
T7 SWCV Class 8	Diesel	0.01%	0.01%	0.05	8.31	0.14	0.05	0.30	0.11
T7 SWCV Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.40	0.13
T7 SWCV Class 8	Natural Gas	0.05%	0.03%	0.12	2.72	66.60	0.00	1.45	0.49
T7 Tractor Class 8	Diesel	0.09%	0.05%	0.10	12.10	0.50	0.12	1.41	0.59
T7 Tractor Class 8	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.13	0.04
T7 Tractor Class 8	Natural Gas	0.01%	0.00%	0.01	0.19	3.93	0.00	0.11	0.04
T7 Utility Class 8	Diesel	0.00%	0.00%	0.00	0.12	0.01	0.00	0.02	0.01
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.01	0.00
T7IS	Gasoline	0.00%	0.00%	0.04	0.20	2.46	0.00	0.01	0.00
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.02%	0.01	0.04	1.33	0.02	0.23	0.08
UBUS	Diesel	0.01%	0.01%	0.08	0.45	0.09	0.01	0.18	0.06
UBUS	Electricity	0.14%	0.15%	0.00	0.00	0.00	0.00	1.39	0.44
UBUS	Natural Gas	0.00%	0.00%	0.03	0.03	23.30	0.00	0.07	0.02
		100%	100%	92.03	459.34	5341.40	29.94	236.97	79.91

Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

		g/mile																
																VMT	% of VMT	
Vehicle Category	Fuel	ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM10_Total	PM2.5_RUNE	PM2.5_PMT	PM2.5_PMB	PM2.5_Total	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	VMT	% of VMT
All Other Buses	Diesel	0.09023686	1.36259636	0.25165078	0.01128051	0.03327595	0.012	0.0461373	9.14E-02	0.03183645	0.003	0.01614806	5.10E-02	1192.33091	0.00419127	0.1876833	64,141	0.371%
All Other Buses	Natural Gas	0.01042305	0.30013161	3.09186636	0	0.00058185	0.012	0.0461373	5.87E-02	0.00053499	0.003	0.01614806	1.97E-02	1073.83879	0.72949556	0.21890906	830	0.005%
LDA	Gasoline	0.01530634	0.06882302	0.90378829	0.00292279	0.00159989	0.008	0.00677993	1.64E-02	0.00147107	0.002	0.00237298	5.84E-03	295.362746	0.00366328	0.0061982	9,059,972	52.422%
LDA	Diesel	0.03527123	0.33005	0.37968837	0.00230905	0.02221369	0.008	0.00685339	3.71E-02	0.002125274	0.002	0.00239869	2.57E-02	243.905095	0.00163828	0.03839279	30,529	0.177%
LDA	Electricity	0	0	0	0	0	0.008	0.00435954	1.24E-02	0	0.002	0.00152584	3.53E-03	0	0	0	370,112	2.142%
LDA	Plug-in Hybrid	0.00147497	0.00348629	0.21909105	0.00144487	0.00098388	0.008	0.0037207	1.27E-02	0.00090465	0.002	0.00130224	4.21E-03	146.011323	0.00046708	0.00063499	201,713	1.167%
LDT1	Gasoline	0.04564373	0.20667522	1.95243236	0.00345464	0.00250221	0.008	0.00831316	1.88E-02	0.00230125	0.002	0.00290961	7.21E-03	349.10819	0.00979161	0.01352281	746,068	4.317%
LDT1	Diesel	0.32948029	1.71627994	1.74980216	0.00400141	0.2595678	0.008	0.00974693	2.77E-01	0.24833901	0.002	0.00341143	2.54E-01	422.669418	0.01530373	0.06653186	191	0.001%
LDT1	Electricity	0	0	0	0	0	0.008	0.00439457	1.24E-02	0	0.002	0.0015381	3.54E-03	0	0	0	1,489	0.009%
LDT1	Plug-in Hybrid	0.00148565	0.00351155	0.22067637	0.00145534	0.00107671	0.008	0.00371874	1.28E-02	0.00098999	0.002	0.00130156	4.29E-03	147.068798	0.00047142	0.00064206	13	0.000%
LDT2	Gasoline	0.01682603	0.10611928	1.01111408	0.00367151	0.00162213	0.008	0.00794764	1.76E-02	0.00149166	0.002	0.00278167	6.27E-03	371.024169	0.00399448	0.00781007	3,691,162	21.358%
LDT2	Diesel	0.01594744	0.06819664	0.14105965	0.00319887	0.00701135	0.008	0.00792162	2.29E-02	0.00670804	0.002	0.00277257	1.15E-02	337.897344	0.00074073	0.05318799	14,433	0.084%
LDT2	Electricity	0	0	0	0	0	0.008	0.0043492	1.23E-02	0	0.002	0.00152222	3.52E-03	0	0	0	1,032	0.006%
LHD1	Plug-in Hybrid	0.0014536	0.00343578	0.21599352	0.00142409	0.0010437	0.008	0.00372269	1.28E-02	0.00095964	0.002	0.00130294	4.26E-03	143.911039	0.00046381	0.00063479	9,002	0.052%
LHD1	Gasoline	0.05935272	0.2385125	1.43832009	0.00919041	0.00189805	0.008	0.07800002	8.79E-02	0.00174634	0.002	0.002730001	3.10E-02	928.736258	0.01164255	0.0133348	336,732	1.948%
LHD1	Diesel	0.24776536	2.9607525	0.7474862	0.00614123	0.05676349	0.012	0.07800002	1.47E-01	0.05430793	0.003	0.002730001	8.46E-02	648.69946	0.01150823	0.10211096	111,039	0.642%
LHD2	Gasoline	0.05915216	0.28354714	1.38479235	0.01044345	0.00189906	0.008	0.09100003	1.01E-01	0.00174611	0.002	0.003185001	3.56E-02	1055.36143	0.01210184	0.01575783	37,198	0.215%
LHD2	Diesel	0.20223413	2.0462862	0.55266265	0.00753069	0.04515676	0.012	0.09100003	1.48E-01	0.04320033	0.003	0.003185001	7.81E-02	795.468393	0.00939339	0.12521367	44,855	0.260%
MCY	Gasoline	1.44302706	0.70285756	16.5007904	0.00193185	0.00199749	0.004	0.012	1.80E-02	0.00188	0.001	0.0042	7.08E-03	195.222634	0.20593077	0.04514856	56,767	0.328%
MDV	Gasoline	0.02646904	0.15198238	1.21999981	0.00441121	0.00171417	0.008	0.00805101	1.78E-02	0.00157696	0.002	0.00281785	6.39E-03	445.773984	0.00568427	0.01005737	2,045,190	11.834%
MDV	Diesel	0.01258222	0.06645486	0.19418471	0.00410529	0.00618437	0.008	0.00788387	2.21E-02	0.00591683	0.002	0.00275935	1.07E-02	433.642573	0.00058442	0.06825913	35,425	0.205%
MDV	Electricity	0	0	0	0	0	0.008	0.00442935	1.24E-02	0	0.002	0.00155027	3.55E-03	0	0	0	18	0.000%
MDV	Plug-in Hybrid	0.0014774	0.00349203	0.21948831	0.00144732	0.00108074	0.008	0.00371668	1.28E-02	0.0009937	0.002	0.00130084	4.29E-03	146.259111	0.00047282	0.0006488	11,022	0.064%
MH	Gasoline	0.2153827	0.90128713	6.18173836	0.01932942	0.00308388	0.012	0.04501744	6.01E-02	0.00284639	0.003	0.0157561	2.16E-02	1953.33228	0.04051957	0.04519606	5,874	0.034%
MH	Diesel	0.11614871	4.11457091	0.38618374	0.01025578	0.09843782	0.016	0.04478528	1.59E-01	0.09417944	0.004	0.01567485	1.14E-01	1083.32004	0.00539489	0.17052404	2,548	0.015%
Motor Coach	Diesel	0.17747673	4.32936964	0.62334635	0.01663978	0.10785399	0.012	0.07908361	1.99E-01	0.10318828	0.003	0.02767927	1.34E-01	1758.79752	0.00824333	0.27685009	9,228	0.053%
OBUS	Gasoline	0.0677254	0.44383266	1.52746629	0.01789527	0.00097071	0.012	0.0447987	5.78E-02	0.0008932	0.003	0.01567955	1.96E-02	1808.40518	0.01394141	0.02306813	17,849	0.103%
PTO	Diesel	0.30465766	5.6434306	1.14532265	0.02062149	0.10244242	0	0	1.02E-01	0.0980108	0	0	9.80E-02	2179.65709	0.01415056	0.34309706	5,033	0.029%
SBUS	Gasoline	0.4112129	1.74465294	1.01104796	0.00842645	0.00346695	0.008	0.04491714	5.64E-02	0.00318773	0.002	0.015721	2.09E-02	851.534042	0.07638922	0.07512445	3,266	0.019%
SBUS	Diesel	0.07653507	0.03031914	0.22383078	0.01104314	0.03087698	0.012	0.04491714	8.78E-02	0.02954126	0.003	0.015721	4.83E-02	1167.24193	0.00355486	0.18373407	3,813	0.022%
SBUS	Natural Gas	0.05224567	0.64622569	12.6839862	0	0.00367426	0.012	0.04491714	6.06E-02	0.00337835	0.003	0.015721	2.21E-02	1299.394	3.65660487	0.26488997	134	0.001%
T6 CAIRP Class 4	Diesel	0.08784755	2.1737169	0.31179644	0.01078547	0.0743992	0.012	0.04231382	1.29E-01	0.07118072	0.003	0.01480984	8.90E-02	1140.00653	0.00408029	0.17944699	125	0.001%
T6 CAIRP Class 5	Diesel	0.05992534	1.63433027	0.22811691	0.01072807	0.05443978	0.012	0.04231382	1.09E-01	0.05208474	0.003	0.01480984	6.99E-02	1133.93937	0.00278338	0.17849196	171	0.001%
T6 CAIRP Class 6	Diesel	0.08555884	2.13799622	0.31782699	0.0106028	0.07668048	0.012	0.04231382	1.31E-01	0.07336332	0.003	0.01480984	9.12E-02	1120.69876	0.00397385	0.17640777	447	0.003%
T6 CAIRP Class 7	Diesel	0.08481135	2.27508197	0.28918725	0.00998568	0.06942336	0.012	0.04231382	1.24E-01	0.06642013	0.003	0.01480984	8.42E-02	1055.46983	0.00393927	0.16614017	2,804	0.016%
T6 Instate Delivery Class 4	Diesel	0.59496108	7.55017277	1.56250121	0.01195801	0.24061795	0.012	0.04756293	3.00E-01	0.23020893	0.003	0.01664703	2.50E-01	1263.94158	0.0276344	0.19895544	11,788	0.68%
T6 Instate Delivery Class 4	Natural Gas	0.0103841	0.29943898	3.24575461	0	0.00063872	0.012	0.04756293	6.02E-02	0.00058728	0.003	0.01664703	2.02E-02	1111.19651	0.72676944	0.22652468	34	0.000%
T6 Instate Delivery Class 5	Diesel	0.25521981	3.67373973	0.68774855	0.01169047	0.10011212	0.012	0.04756293	1.60E-01	0.09578132	0.003	0.01664703	1.15E-01	1235.66318	0.0118543	0.19450418	9,597	0.056%
T6 Instate Delivery Class 5	Natural Gas	0.0103841	0.29943898	3.24575461	0	0.00063872	0.012	0.04756293	6.02E-02	0.00058728	0.003	0.01664703	2.02E-02	1108.71798	0.72676944	0.22601941	40	0.000%
T6 Instate Delivery Class 6	Diesel	0.40447454	5.16943399	1.06355775	0.01172405	0.16459337	0.012	0.04756293	2.24E-01	0.15747313	0.003	0.01664703	1.77E-01	1239.21305	0.01878679	0.19506296	19,937	0.115%
T6 Instate Delivery Class 6	Natural Gas	0.01042335	0.2949372	3.25650458	0	0.0006646	0.012	0.04756293	6.02E-02	0.0061107	0.003	0.01664703	2.03E-02	1109.40141	0.72951628	0.22615873	62	0.000%
T6 Instate Delivery Class 7	Diesel	0.26824867	4.20913211	0.70580777	0.01162311	0.1136416	0.012	0.04756293	1.73E-01	0.10872551	0.003	0.01664703	1.28E-01	1228.54307	0.01245946	0.19338341	7,892	0.046%
T6 Instate Delivery Class 7	Natural Gas	0.0115213	0.17017706	3.5712466	0	0.00139045	0.012	0.04756293	1.06E-02	0.00127846	0.003	0.01664703	2.09E-02	1089.29352	0.80636063	0.22205991	109	0.001%
T6 Instate Other Class 4	Diesel	0.4866387	7.57858455	1.37111892	0.01119878	0.2476878	0.012	0.04486375	3.05E-01	0.23697294	0.003	0.01570231	2.56E-01	1183.69275	0.02260311	<		



T6 Public Class 6	Diesel	0.12163152	8.13689371	0.27605642	0.01214251	0.05174469	0.012	0.04616939	1.10E-01	0.04950624	0.003	0.01615929	6.87E-02	1283.4429	0.00564947	0.20202512	2,356	0.014%
T6 Public Class 6	Natural Gas	0.01199717	0.16096717	3.09025512	0	0.00130571	0.012	0.04616939	5.95E-02	0.00120056	0.003	0.01615929	2.04E-02	1048.23906	0.83966619	0.21369039	58	0.000%
T6 Public Class 7	Diesel	0.14343546	9.6234489	0.30160376	0.01246516	0.06574629	0.012	0.04616939	1.24E-01	0.06290213	0.003	0.01615929	8.21E-02	1317.54708	0.00666221	0.20739342	6,369	0.037%
T6 Public Class 7	Natural Gas	0.01239707	0.09500838	3.06630431	0	0.00161921	0.012	0.04616939	5.98E-02	0.0014888	0.003	0.01615929	2.06E-02	1066.63726	0.86765436	0.21744098	279	0.002%
T6 Utility Class 5	Diesel	0.02450442	1.27008519	0.09541822	0.01078078	0.00614293	0.012	0.0454967	6.36E-02	0.00587719	0.003	0.01592385	2.48E-02	1139.51065	0.00113817	0.17936893	334	0.002%
T6 Utility Class 5	Natural Gas	0.00934313	0.26930485	2.89365192	0	0.00051779	0.012	0.0454967	5.80E-02	0.00047609	0.003	0.01592385	1.94E-02	1011.11173	0.65391293	0.20612174	5	0.000%
T6 Utility Class 6	Diesel	0.03709456	2.0788349	0.12396768	0.0110259	0.01076047	0.012	0.0454967	6.83E-02	0.01029498	0.003	0.01592385	2.92E-02	1165.41917	0.00172295	0.18344716	63	0.000%
T6 Utility Class 6	Natural Gas	0.00934313	0.26930485	2.89365192	0	0.00051779	0.012	0.0454967	5.80E-02	0.00047609	0.003	0.01592385	1.94E-02	994.839253	0.65391293	0.20280449	1	0.000%
T6 Utility Class 7	Diesel	0.02797374	1.91513665	0.10022891	0.01102339	0.01031175	0.012	0.0454967	6.78E-02	0.00986567	0.003	0.01592385	2.88E-02	1165.15346	0.00129931	0.18340533	87	0.001%
T6 Utility Class 7	Natural Gas	0.00934313	0.26930485	2.89365192	0	0.00051779	0.012	0.0454967	5.80E-02	0.00047609	0.003	0.01592385	1.94E-02	1001.30262	0.65391293	0.20412209	2	0.000%
T6TS	Gasoline	0.21451971	1.15440498	4.79295976	0.01865882	0.00189729	0.012	0.04501744	5.89E-02	0.00174932	0.003	0.0157561	2.05E-02	1885.56546	0.04022217	0.04919389	41,022	0.237%
T7 CAIRP Class 8	Diesel	0.08806958	3.57408466	0.32381457	0.01514726	0.06620886	0.03600001	0.07731106	1.80E-01	0.06334469	0.009	0.02705887	9.94E-02	1601.03976	0.0040906	0.25201764	16,234	0.094%
T7 CAIRP Class 8	Natural Gas	0.01319225	0.26157553	4.59554446	0	0.00173359	0.03600001	0.07409835	1.12E-01	0.0015961	0.009	0.02593442	3.65E-02	1180.99757	0.92330803	0.24075408	28	0.000%
T7 NNOOS Class 8	Diesel	0.14512589	3.8417573	0.57207431	0.0152459	0.10942661	0.03600001	0.0781827	2.24E-01	0.10469286	0.009	0.02736394	1.41E-01	1611.46586	0.00674072	0.2536588	19,308	0.112%
T7 NOOS Class 8	Diesel	0.10285462	3.73929593	0.37499636	0.01514619	0.0737909	0.03600001	0.07747096	1.87E-01	0.07059874	0.009	0.02711483	1.07E-01	1600.92743	0.00477733	0.25199996	7,016	0.041%
T7 Other Port Class 8	Diesel	0.11913469	4.45857695	0.38018881	0.01630522	0.03110788	0.03600001	0.09404076	1.61E-01	0.02976217	0.009	0.03291427	7.17E-02	1723.43466	0.0055335	0.27128367	1,328	0.008%
T7 POAK Class 8	Diesel	0.14737656	4.96540185	0.4688533	0.01632274	0.04140362	0.03600001	0.09604652	1.73E-01	0.03961252	0.009	0.03361628	8.22E-02	1725.2861	0.00684526	0.2715751	4,964	0.029%
T7 POAK Class 8	Natural Gas	0.01695642	0.70398211	11.01611129	0	0.00135516	0.03600001	0.0852388	1.23E-01	0.00124602	0.009	0.02983358	4.01E-02	1492.29997	1.18675744	0.30421511	11	0.000%
T7 Public Class 8	Diesel	0.15636703	11.6208712	0.50601442	0.01858935	0.07508387	0.03600001	0.11901788	2.30E-01	0.07183578	0.009	0.04165626	1.22E-01	1964.86386	0.00726284	0.30928673	14,309	0.083%
T7 Public Class 8	Natural Gas	0.02621664	0.7743524	10.7404495	0	0.00242358	0.03600001	0.10598133	1.44E-01	0.00222839	0.009	0.03709346	4.83E-02	1669.71212	1.83486766	0.34038174	53	0.000%
T7 Single Concrete/Transit Mix Cla	Diesel	0.01741355	1.11827576	0.09040432	0.01619691	0.01920311	0.03600001	0.08115877	1.36E-01	0.01837239	0.009	0.02840557	5.58E-02	1711.98678	0.00080881	0.26948167	3,381	0.020%
T7 Single Concrete/Transit Mix Cla	Natural Gas	0.01516677	0.35905678	6.65029162	0	0.00182789	0.03600001	0.08072408	1.19E-01	0.00168068	0.009	0.02825343	3.89E-02	1265.94428	1.06150241	0.25807102	213	0.001%
T7 Single Dump Class 8	Diesel	0.1660726	4.85762583	0.58262447	0.01606351	0.09306281	0.03600001	0.08782037	2.17E-01	0.08903695	0.009	0.03073713	1.29E-01	1697.88672	0.00771364	0.2672622	10,305	0.060%
T7 Single Dump Class 8	Natural Gas	0.0151328	0.42671798	7.6384999	0	0.00166932	0.03600001	0.08267386	1.20E-01	0.00153488	0.009	0.02893585	3.95E-02	1313.2269	1.05912467	0.26770989	497	0.003%
T7 Single Other Class 8	Diesel	0.15784723	4.32777949	0.57900138	0.0160521	0.09652549	0.03600001	0.08756635	2.20E-01	0.09234984	0.009	0.03064822	1.32E-01	1696.68016	0.00733159	0.26707228	10,326	0.060%
T7 Single Other Class 8	Natural Gas	0.01513986	0.42905485	7.56444482	0	0.00167724	0.03600001	0.08269895	1.20E-01	0.00154216	0.009	0.02894463	3.95E-02	1299.84827	1.05961838	0.26498257	627	0.004%
T7 SWCV Class 8	Diesel	0.04377787	8.24370699	0.12018721	0.03889449	0.01019477	0.03600001	0.21000006	2.56E-01	0.00975375	0.009	0.07350002	9.23E-02	4111.08307	0.00203337	0.64712038	10,484	0.061%
T7 SWCV Class 8	Natural Gas	0.16882529	3.35297856	26.3169916	0	0.0035084	0.03600001	0.21000006	2.50E-01	0.00322585	0.009	0.07350002	8.57E-02	1803.55406	6.1069263	0.36766629	5,515	0.032%
T7 Tractor Class 8	Diesel	0.14878377	4.87798154	0.53921417	0.01511066	0.08692597	0.03600001	0.08537644	2.08E-01	0.08316559	0.009	0.02988175	1.22E-01	1597.17173	0.00691062	0.25140878	13,764	0.080%
T7 Tractor Class 8	Natural Gas	0.01422534	0.56368257	9.75574144	0	0.00124061	0.03600001	0.07846222	1.16E-01	0.0011407	0.009	0.02746177	3.76E-02	1222.10413	0.92561278	0.24913392	1,144	0.007%
T7 Utility Class 8	Diesel	0.04099307	2.46174933	0.19832984	0.01681248	0.01136378	0.03600001	0.09839523	1.46E-01	0.01087219	0.009	0.03443833	5.43E-02	1777.05075	0.00190402	0.27972331	267	0.002%
T7IS	Gasoline	1.23904181	5.42401847	45.5168532	0.0232596	0.00269846	0.02000001	0.09164384	1.14E-01	0.00251227	0.005	0.03207534	3.96E-02	2350.49649	0.18489648	0.1721445	634	0.004%
UBUS	Gasoline	0.00787002	0.05339247	0.56692448	0.01046387	0.00071715	0.00829031	0.09237901	1.01E-01	0.00065939	0.00207258	0.03233265	3.51E-02	1057.42535	0.00263456	0.00627767	4,118	0.024%
UBUS	Diesel	0.16158143	5.4205765	0.3110225	0.01442431	0.0090402	0.0317932	0.11000003	1.51E-01	0.00864913	0.0079483	0.03850001	5.51E-02	1523.64316	0.00750504	0.23983474	29,399	0.170%
UBUS	Electricity	0	0	0	0	0	0.03600001	0.05500002	9.10E-02	0	0.009	0.01925001	2.83E-02	0	0	0	15	0.000%

17,282,737 100.000%

Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC202x Category

Units: miles/day for CVMT and EVMT, trips/

		lbs/Mile														CO2(Pavley+ AACC)_RUNE			1.0E-06	
Vehicle Category	Fuel	ROG_RUNE	NOx_RUNE	CO_RUNE	SOx_RUNE	PM10_RUNE	PM10_PMTW	PM10_PMBW	PM10_Total	PM2.5_RUNE	PM2.5_PMT	PM2.5_PMB	PM2.5_Total	CH4_RUNE	N2O_RUNE					
All Other Buses	Diesel	1.989E-04	3.004E-03	5.548E-04	2.487E-05	7.336E-05	2.646E-05	1.017E-04	2.015E-04	7.019E-05	6.614E-06	3.560E-05	1.124E-04	2.629E+00	9.240E-06	4.138E-04				
All Other Buses	Natural Gas	2.298E-05	6.617E-04	6.816E-03	0.000E+00	1.283E-06	2.646E-05	1.017E-04	1.295E-04	1.179E-06	6.614E-06	3.560E-05	4.339E-05	2.367E+00	1.608E-03	4.826E-04				
LDA	Gasoline	3.374E-05	1.517E-04	1.992E-03	6.444E-06	3.527E-06	1.764E-05	1.495E-05	3.611E-05	3.243E-06	4.409E-06	5.231E-06	1.288E-05	6.512E-01	8.076E-06	1.366E-05				
LDA	Diesel	7.776E-05	7.276E-04	8.371E-04	5.091E-06	4.897E-05	1.764E-05	1.511E-05	8.172E-05	4.685E-05	4.409E-06	5.288E-06	5.655E-05	5.377E-01	3.612E-06	8.464E-05				
LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.611E-06	2.725E-05	0.000E+00	4.409E-06	3.364E-06	7.773E-06	0.000E+00	0.000E+00	0.000E+00				
LDA	Plug-in Hybrid	3.252E-06	7.686E-06	4.830E-04	3.185E-06	2.169E-06	1.764E-05	8.203E-06	2.801E-05	1.994E-06	4.409E-06	2.871E-06	9.275E-06	3.219E-01	1.030E-06	1.400E-06				
LDT1	Gasoline	1.006E-04	4.556E-04	4.304E-03	7.616E-06	5.516E-06	1.764E-05	1.833E-05	4.148E-05	5.073E-06	4.409E-06	6.415E-06	1.590E-05	7.696E-01	2.159E-05	2.981E-05				
LDT1	Diesel	7.264E-04	3.784E-03	3.858E-03	8.821E-06	5.722E-04	1.764E-05	2.149E-05	6.114E-04	5.475E-04	4.409E-06	7.521E-06	5.594E-04	9.318E-01	3.374E-05	1.467E-04				
LDT1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.688E-06	2.733E-05	0.000E+00	4.409E-06	3.391E-06	7.800E-06	0.000E+00	0.000E+00	0.000E+00				
LDT1	Plug-in Hybrid	3.275E-06	7.742E-06	4.865E-04	3.208E-06	2.374E-06	1.764E-05	8.198E-06	2.821E-05	2.183E-06	4.409E-06	2.869E-06	9.461E-06	3.242E-01	1.039E-06	1.415E-06				
LDT2	Gasoline	3.709E-05	2.340E-04	2.229E-03	8.094E-06	3.576E-06	1.764E-05	1.752E-05	3.873E-05	3.289E-06	4.409E-06	6.132E-06	1.383E-05	8.180E-01	8.806E-06	1.722E-05				
LDT2	Diesel	3.516E-05	1.503E-04	3.110E-04	7.052E-06	1.546E-05	1.764E-05	1.746E-05	5.056E-05	1.479E-05	4.409E-06	6.112E-06	2.531E-05	7.449E-01	1.633E-06	1.173E-04				
LDT2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.588E-06	2.723E-05	0.000E+00	4.409E-06	3.356E-06	7.765E-06	0.000E+00	0.000E+00	0.000E+00				
LDT2	Plug-in Hybrid	3.205E-06	7.575E-06	4.762E-04	3.140E-06	2.301E-06	1.764E-05	8.207E-06	2.814E-05	2.116E-06	4.409E-06	2.872E-06	9.397E-06	3.173E-01	1.023E-06	1.399E-06				
LHD1	Gasoline	1.308E-04	5.258E-04	3.171E-03	2.026E-05	4.184E-06	1.764E-05	1.720E-04	1.938E-04	3.850E-06	4.409E-06	6.019E-05	6.844E-05	2.047E+00	2.567E-05	2.940E-05				
LHD1	Diesel	5.462E-04	6.527E-03	1.648E-03	1.354E-05	1.251E-04	2.646E-05	1.720E-04	3.236E-04	1.197E-04	6.614E-06	6.019E-05	1.865E-04	1.430E+00	2.537E-05	2.251E-04				
LHD2	Gasoline	1.304E-04	6.251E-04	3.053E-03	2.302E-05	4.187E-06	1.764E-05	2.006E-04	2.224E-04	3.849E-06	4.409E-06	7.022E-05	7.848E-05	2.327E+00	2.668E-05	3.474E-05				
LHD2	Diesel	4.458E-04	4.511E-03	1.218E-03	1.660E-05	9.955E-05	2.646E-05	2.006E-04	3.266E-04	9.525E-05	6.614E-06	7.022E-05	1.721E-04	1.754E+00	2.071E-05	2.760E-04				
MCY	Gasoline	3.181E-03	1.550E-03	3.638E-02	4.259E-06	4.404E-06	8.818E-06	2.646E-05	3.968E-05	4.145E-06	2.205E-06	9.259E-06	1.561E-05	4.304E-01	4.540E-04	9.953E-05				
MDV	Gasoline	5.835E-05	3.351E-04	2.690E-03	9.725E-06	3.779E-06	1.764E-05	1.775E-05	3.917E-05	3.477E-06	4.409E-06	6.212E-06	1.410E-05	9.828E-01	1.253E-05	2.217E-05				
MDV	Diesel	2.774E-05	1.465E-04	4.281E-04	9.051E-06	1.363E-05	1.764E-05	1.738E-05	4.865E-05	1.304E-05	4.409E-06	6.083E-06	2.354E-05	9.560E-01	1.288E-06	1.505E-04				
MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.765E-06	2.740E-05	0.000E+00	4.409E-06	3.418E-06	7.827E-06	0.000E+00	0.000E+00	0.000E+00				
MDV	Plug-in Hybrid	3.257E-06	7.699E-06	4.839E-04	3.191E-06	2.383E-06	1.764E-05	8.194E-06	2.821E-05	2.191E-06	4.409E-06	2.868E-06	9.468E-06	3.224E-01	1.042E-06	1.430E-06				
MH	Gasoline	4.748E-04	1.987E-03	1.363E-02	4.261E-05	6.799E-06	2.646E-05	9.925E-05	1.325E-04	6.275E-06	6.614E-06	3.474E-05	4.762E-05	4.306E+00	8.933E-05	9.964E-05				
MH	Diesel	2.561E-04	9.071E-03	8.514E-04	2.261E-05	2.170E-04	3.527E-05	9.873E-05	3.510E-04	2.076E-04	8.818E-06	3.456E-05	2.510E-04	2.388E+00	1.189E-05	3.759E-04				
Motor Coach	Diesel	3.913E-04	9.545E-03	1.374E-03	3.668E-05	2.378E-04	2.646E-05	1.743E-04	4.386E-04	2.275E-04	6.614E-06	6.102E-05	2.951E-04	3.877E+00	1.817E-05	6.103E-04				
OBUS	Gasoline	1.493E-04	9.785E-04	3.367E-03	3.945E-05	2.140E-06	2.646E-05	9.876E-05	1.274E-04	1.969E-06	6.614E-06	3.457E-05	4.315E-05	3.987E+00	3.074E-05	5.086E-05				
PTO	Diesel	6.716E-04	1.244E-02	2.525E-03	4.546E-05	2.258E-04	0.000E+00	0.000E+00	2.258E-04	2.161E-04	0.000E+00	0.000E+00	2.161E-04	4.805E+00	3.120E-05	7.564E-04				
SBUS	Gasoline	9.066E-04	3.846E-03	2.229E-02	1.858E-05	7.643E-06	1.764E-05	9.902E-05	1.243E-04	7.028E-06	4.409E-06	3.466E-05	4.610E-05	1.877E+00	1.684E-04	1.656E-04				
SBUS	Diesel	1.687E-04	1.329E-02	4.935E-04	2.435E-05	6.807E-05	2.646E-05	9.902E-05	1.936E-04	6.513E-05	6.614E-06	3.466E-05	1.064E-04	2.573E+00	7.837E-06	4.051E-04				
SBUS	Natural Gas	1.152E-04	1.425E-03	2.796E-02	0.000E+00	8.100E-06	2.646E-05	9.902E-05	1.336E-04	7.448E-06	6.614E-06	3.466E-05	4.872E-05	2.865E+00	8.061E-03	5.840E-04				
T6 CAIRP Class 4	Diesel	1.937E-04	4.792E-03	6.874E-04	2.378E-05	1.640E-04	2.646E-05	9.329E-05	2.838E-04	1.569E-04	6.614E-06	3.265E-05	1.962E-04	2.513E+00	8.995E-06	3.956E-04				
T6 CAIRP Class 5	Diesel	1.321E-04	3.603E-03	5.029E-04	2.365E-05	1.200E-04	2.646E-05	9.329E-05	2.398E-04	1.148E-04	6.614E-06	3.265E-05	1.541E-04	2.500E+00	6.136E-06	3.935E-04				
T6 CAIRP Class 6	Diesel	1.886E-04	4.713E-03	7.007E-04	2.337E-05	1.690E-04	2.646E-05	9.329E-05	2.888E-04	1.617E-04	6.614E-06	3.265E-05	2.010E-04	2.471E+00	8.761E-06	3.889E-04				
T6 CAIRP Class 7	Diesel	1.870E-04	5.016E-03	6.375E-04	2.201E-05	1.531E-04	2.646E-05	9.329E-05	2.728E-04	1.464E-04	6.614E-06	3.265E-05	1.857E-04	2.327E+00	8.685E-06	3.663E-04				
T6 Instate Delivery Class 4	Diesel	1.312E-03	1.665E-02	3.445E-03	2.636E-05	5.305E-04	2.646E-05	1.049E-04	6.618E-04	5.075E-04	6.614E-06	3.670E-05	5.508E-04	2.786E+00	6.092E-05	4.386E-04				
T6 Instate Delivery Class 4	Natural Gas	2.289E-05	6.601E-04	7.156E-03	0.000E+00	1.408E-06	2.646E-05	1.049E-04	1.327E-04	1.295E-06	6.614E-06	3.670E-05	4.461E-05	2.450E+00	1.602E-03	4.994E-04				
T6 Instate Delivery Class 5	Diesel	5.627E-04	8.099E-03	1.516E-03	2.577E-05	2.207E-04	2.646E-05	1.049E-04	3.520E-04	2.112E-04	6.614E-06	3.670E-05	2.545E-04	2.724E+00	2.613E-05	4.288E-04				
T6 Instate Delivery Class 5	Natural Gas	2.289E-05	6.601E-04	7.156E-03	0.000E+00	1.408E-06	2.646E-05	1.049E-04	1.327E-04	1.295E-06	6.614E-06	3.670E-05	4.461E-05	2.444E+00	1.602E-03	4.983E-04				
T6 Instate Delivery Class 6	Diesel	8.917E-04	1.140E-02	2.345E-03	2.585E-05	3.629E-04	2.646E-05	1.049E-04	4.942E-04	3.472E-04	6.614E-06	3.670E-05	3.905E-04	2.732E+00	4.142E-05	4.300E-04				
T6 Instate Delivery Class 6	Natural Gas	2.298E-05	6.502E-04	7.179E-03	0.000E+00	1.465E-06	2.646E-05	1.049E-04	1.328E-04	1.347E-06	6.614E-06	3.670E-05	4.466E-05	2.446E+00	1.608E-03	4.986E-04				
T6 Instate Delivery Class 7	Diesel	5.914E-04	9.279E-03	1.556E-03	2.562E-05	2.505E-04	2.646E-05	1.049E-04	3.818E-04	2.397E-04	6.614E-06	3.670E-05	2.830E-04	2.708E+00	2.747E-05	4.263E-04				
T6 Instate Delivery Class 7	Natural Gas	2.540E-05	3.752E-04	7.873E-03	0.000E+00	3.065E-06	2.646E-05	1.049E-04	1.344E-04	2.818E-06	6.614E-06	3.670E-05	4.613E-05	2.401E+00	1.778E-03	4.896E-04				
T6 Instate Other Class 4	Diesel	1.073E-03	1.671E-02	3.023E-03	2.469E-05	5.461E-04	2.646E-05	9.891E-05	6.714E-04	5.224E-04	6.614E-06	3.462E-05	5.637E-04	2.610E+00	4.983E-05	4.108E-04				
T6 Instate Other Class 4	Natural Gas	1.758E-05	4.999E-04	6.242E-03	0.000E+00	1.135E-06	2.646E-05	9.891E-05	1.265E-04	1.043E-06	6.614E-06	3.462E-05	4.227E-05	2.129E+00	1.231E-03	4.340E-04				
T6 Instate Other Class 5	Diesel	3.551E-04	6.221E-03	1.058E-03	2.439E-05	1.790E-04	2.646E-05	9.891E-05	3.043E-04	1.712E-04	6.614E-06	3.462E-05	2.125E-04	2.578E+00	1.650E-05	4.058E-04				
T6 Instate Other Class 5	Natural Gas	1.752E-05	5.057E-04	6.247E-03	0.000E+00	1.100E-06	2.646E-05	9.891E-05	1.265E-04	1.012E-06	6.614E-06	3.462E-05	4.224E-05	2.127E+00	1.226E-03	4.335E-				

T6 Public Class 6	Diesel	2.681E-04	1.794E-02	6.086E-04	2.677E-05	1.141E-04	2.646E-05	1.018E-04	2.423E-04	1.091E-04	6.614E-06	3.562E-05	1.514E-04	2.829E+00	1.245E-05	4.454E-04	
T6 Public Class 6	Natural Gas	2.645E-05	3.549E-04	6.813E-03	0.000E+00	2.879E-06	2.646E-05	1.018E-04	1.311E-04	2.647E-06	6.614E-06	3.562E-05	4.489E-05	2.311E+00	1.851E-03	4.711E-04	
T6 Public Class 7	Diesel	3.162E-04	2.122E-02	6.649E-04	2.748E-05	1.449E-04	2.646E-05	1.018E-04	2.732E-04	1.387E-04	6.614E-06	3.562E-05	1.809E-04	2.905E+00	1.469E-05	4.572E-04	
T6 Public Class 7	Natural Gas	2.733E-05	2.095E-04	6.760E-03	0.000E+00	3.570E-06	2.646E-05	1.018E-04	1.318E-04	3.282E-06	6.614E-06	3.562E-05	4.552E-05	2.352E+00	1.913E-03	4.794E-04	
T6 Utility Class 5	Diesel	5.402E-05	2.800E-03	2.104E-04	2.377E-05	1.354E-05	2.646E-05	1.003E-04	1.403E-04	1.294E-05	6.614E-06	3.511E-05	5.468E-05	2.512E+00	2.509E-06	3.954E-04	
T6 Utility Class 5	Natural Gas	2.060E-05	5.937E-04	6.379E-03	0.000E+00	1.142E-06	2.646E-05	1.003E-04	1.279E-04	1.050E-06	6.614E-06	3.511E-05	4.277E-05	2.229E+00	1.442E-03	4.544E-04	
T6 Utility Class 6	Diesel	8.178E-05	4.583E-03	2.733E-04	2.431E-05	2.372E-05	2.646E-05	1.003E-04	1.505E-04	2.270E-05	6.614E-06	3.511E-05	6.442E-05	2.569E+00	3.798E-06	4.044E-04	
T6 Utility Class 6	Natural Gas	2.060E-05	5.937E-04	6.379E-03	0.000E+00	1.142E-06	2.646E-05	1.003E-04	1.279E-04	1.050E-06	6.614E-06	3.511E-05	4.277E-05	2.193E+00	1.442E-03	4.471E-04	
T6 Utility Class 7	Diesel	6.167E-05	4.222E-03	2.210E-04	2.430E-05	2.273E-05	2.646E-05	1.003E-04	1.495E-04	2.175E-05	6.614E-06	3.511E-05	6.347E-05	2.569E+00	2.864E-06	4.043E-04	
T6 Utility Class 7	Natural Gas	2.060E-05	5.937E-04	6.379E-03	0.000E+00	1.142E-06	2.646E-05	1.003E-04	1.279E-04	1.050E-06	6.614E-06	3.511E-05	4.277E-05	2.207E+00	1.442E-03	4.500E-04	
T6TS	Gasoline	4.729E-04	2.545E-03	1.057E-02	4.114E-05	4.183E-06	2.646E-05	9.925E-05	1.299E-04	3.857E-06	6.614E-06	3.474E-05	4.521E-05	4.157E+00	8.867E-05	1.085E-04	
T7 CAIRP Class 8	Diesel	1.942E-04	7.879E-03	7.139E-04	3.339E-05	1.460E-04	7.937E-05	1.704E-04	3.958E-04	1.396E-04	1.984E-05	5.965E-05	2.191E-04	3.530E+00	9.018E-06	5.556E-04	
T7 CAIRP Class 8	Natural Gas	2.908E-05	5.767E-04	1.013E-02	0.000E+00	3.827E-06	7.937E-05	1.634E-04	2.465E-04	3.519E-06	1.984E-05	5.718E-05	8.054E-05	2.604E+00	2.036E-03	5.308E-04	
T7 NNOOS Class 8	Diesel	3.199E-04	8.470E-03	1.261E-03	3.361E-05	2.412E-04	7.937E-05	1.724E-04	4.930E-04	2.308E-04	1.984E-05	6.033E-05	3.110E-04	3.553E+00	1.486E-05	5.592E-04	
T7 NOOS Class 8	Diesel	2.268E-04	8.244E-03	8.267E-04	3.339E-05	1.627E-04	7.937E-05	1.708E-04	4.128E-04	1.556E-04	1.984E-05	5.978E-05	2.353E-04	3.529E+00	1.053E-05	5.556E-04	
T7 Other Port Class 8	Diesel	2.626E-04	9.829E-03	8.382E-04	3.595E-05	6.858E-05	7.937E-05	2.073E-04	3.553E-04	6.561E-05	1.984E-05	7.256E-05	1.580E-04	3.799E+00	1.220E-05	5.981E-04	
T7 POAK Class 8	Diesel	3.249E-04	1.095E-02	1.034E-03	3.599E-05	9.128E-05	7.937E-05	2.117E-04	3.824E-04	8.733E-05	1.984E-05	7.411E-05	1.813E-04	3.804E+00	1.509E-05	5.987E-04	
T7 POAK Class 8	Natural Gas	3.738E-05	1.552E-03	2.429E-02	0.000E+00	2.988E-06	7.937E-05	1.879E-04	2.703E-04	2.747E-06	1.984E-05	6.577E-05	8.836E-05	3.290E+00	2.616E-03	6.707E-04	
T7 Public Class 8	Diesel	3.447E-04	2.562E-02	1.116E-03	4.098E-05	1.655E-04	7.937E-05	2.624E-04	5.073E-04	1.584E-04	1.984E-05	9.184E-05	2.700E-04	4.332E+00	1.601E-05	6.819E-04	
T7 Public Class 8	Natural Gas	5.780E-05	1.707E-03	2.368E-02	0.000E+00	5.343E-06	7.937E-05	2.336E-04	3.184E-04	4.913E-06	1.984E-05	8.178E-05	1.065E-04	3.681E+00	4.045E-03	7.504E-04	
T7 Single Concrete/Transit Mix Cla	Diesel	3.839E-05	2.465E-03	1.993E-04	3.571E-05	4.234E-05	7.937E-05	1.789E-04	3.006E-04	4.050E-05	1.984E-05	6.262E-05	1.230E-04	3.774E+00	1.783E-06	5.941E-04	
T7 Single Concrete/Transit Mix Cla	Natural Gas	3.344E-05	7.916E-04	1.466E-02	0.000E+00	4.030E-06	7.937E-05	1.780E-04	2.614E-04	3.705E-06	1.984E-05	6.229E-05	8.583E-05	2.791E+00	2.340E-03	5.689E-04	
T7 Single Dump Class 8	Diesel	3.661E-04	1.071E-02	1.284E-03	3.541E-05	2.052E-04	7.937E-05	1.936E-04	4.781E-04	1.963E-04	1.984E-05	6.776E-05	2.839E-04	3.743E+00	1.701E-05	5.892E-04	
T7 Single Dump Class 8	Natural Gas	3.336E-05	9.407E-04	1.684E-02	0.000E+00	3.680E-06	7.937E-05	1.823E-04	2.653E-04	3.384E-06	1.984E-05	6.379E-05	8.702E-05	2.895E+00	2.335E-03	5.902E-04	
T7 Single Other Class 8	Diesel	3.480E-04	9.541E-03	1.276E-03	3.539E-05	2.128E-04	7.937E-05	1.930E-04	4.852E-04	2.036E-04	1.984E-05	6.757E-05	2.910E-04	3.741E+00	1.616E-05	5.888E-04	
T7 Single Other Class 8	Natural Gas	3.338E-05	9.459E-04	1.668E-02	0.000E+00	3.698E-06	7.937E-05	1.823E-04	2.654E-04	3.400E-06	1.984E-05	6.381E-05	8.705E-05	2.866E+00	2.336E-03	5.842E-04	
T7 SWCV Class 8	Diesel	9.651E-05	1.817E-02	2.650E-04	8.575E-05	2.248E-05	7.937E-05	4.630E-04	5.648E-04	2.150E-05	1.984E-05	1.620E-04	2.034E-04	9.063E+00	4.483E-06	1.427E-03	
T7 SWCV Class 8	Natural Gas	3.722E-04	7.392E-03	5.802E-02	0.000E+00	7.735E-06	7.937E-05	4.630E-04	5.501E-04	7.112E-06	1.984E-05	1.620E-04	1.890E-04	3.976E+00	1.346E-02	8.106E-04	
T7 Tractor Class 8	Diesel	3.280E-04	1.075E-02	1.189E-03	3.331E-05	1.916E-04	7.937E-05	1.882E-04	4.592E-04	1.833E-04	1.984E-05	6.588E-05	2.691E-04	3.521E+00	1.524E-05	5.543E-04	
T7 Tractor Class 8	Natural Gas	3.136E-05	1.243E-03	2.151E-02	0.000E+00	2.735E-06	7.937E-05	1.730E-04	2.551E-04	2.515E-06	1.984E-05	6.054E-05	8.290E-05	2.694E+00	2.195E-03	5.492E-04	
T7 Utility Class 8	Diesel	9.037E-05	5.427E-03	4.372E-04	3.706E-05	2.505E-05	7.937E-05	2.169E-04	3.213E-04	2.397E-05	1.984E-05	7.592E-05	1.197E-04	3.918E+00	4.198E-06	6.167E-04	
T7IS	Gasoline	2.732E-03	1.196E-02	1.003E-01	5.128E-05	5.949E-06	4.409E-05	2.020E-04	2.521E-04	5.539E-06	1.102E-05	7.071E-05	8.727E-05	5.182E+00	4.076E-04	3.795E-04	
UBUS	Gasoline	1.735E-05	1.177E-04	1.250E-03	2.307E-05	1.581E-06	1.828E-05	2.037E-04	2.235E-04	1.454E-06	4.569E-06	7.128E-05	7.730E-05	2.331E+00	5.808E-06	1.384E-05	
UBUS	Diesel	3.562E-04	1.195E-02	6.857E-04	3.180E-05	1.993E-05	7.009E-05	2.425E-04	3.325E-04	1.907E-05	1.752E-05	8.488E-05	1.215E-04	3.359E+00	1.655E-05	5.287E-04	
UBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	1.213E-04	2.006E-04	0.000E+00	1.984E-05	4.244E-05	6.228E-05	0.000E+00	0.000E+00	0.000E+00	

Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC202x Category

Units: miles/day for CVMT and EVMT, trips/

		MTons/Mile														CO2(Pavley+ AACC)_RUNE			
Vehicle Category	Fuel	ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM10_Total	PM2.5_RUNE	PM2.5_PMT	PM2.5_PMB	PM2.5_Total	CH4_RUNEX	N2O_RUNEX				
All Other Buses	Diesel	9.024E-08	1.363E-06	2.517E-07	1.128E-08	3.328E-08	1.200E-08	4.614E-08	9.141E-08	3.184E-08	3.000E-09	1.615E-08	5.098E-08	1.192E-03	4.191E-09	1.877E-07			
All Other Buses	Natural Gas	1.042E-08	3.001E-07	3.092E-06	0.000E+00	5.819E-10	1.200E-08	4.614E-08	5.872E-08	5.350E-10	3.000E-09	1.615E-08	1.968E-08	1.074E-03	7.295E-07	2.189E-07			
LDA	Gasoline	1.531E-08	6.882E-08	9.038E-07	2.923E-09	1.600E-09	8.000E-09	6.780E-09	1.638E-08	1.471E-09	2.000E-09	2.373E-09	5.844E-09	2.954E-04	3.663E-09	6.198E-09			
LDA	Diesel	3.527E-08	3.300E-07	3.797E-07	2.309E-09	2.221E-08	8.000E-09	6.853E-09	3.707E-08	2.125E-08	2.000E-09	2.399E-09	2.565E-08	2.439E-04	1.638E-09	3.839E-08			
LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.360E-09	1.236E-08	0.000E+00	2.000E-09	1.526E-09	3.526E-09	0.000E+00	0.000E+00	0.000E+00			
LDA	Plug-in Hybrid	1.475E-09	3.486E-09	2.191E-07	1.445E-09	9.839E-10	8.000E-09	3.721E-09	1.270E-08	9.046E-10	2.000E-09	1.302E-09	4.207E-09	1.460E-04	4.671E-10	6.350E-10			
LDT1	Gasoline	4.564E-08	2.067E-07	1.952E-06	3.455E-09	2.502E-09	8.000E-09	8.313E-09	1.882E-08	2.301E-09	2.000E-09	2.910E-09	7.211E-09	3.491E-04	9.792E-09	1.352E-08			
LDT1	Diesel	3.295E-07	1.716E-06	1.750E-06	4.001E-09	2.596E-07	8.000E-09	9.747E-09	2.773E-07	2.483E-07	2.000E-09	3.411E-09	2.538E-07	4.227E-04	1.530E-08	6.653E-08			
LDT1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.395E-09	1.239E-08	0.000E+00	2.000E-09	1.538E-09	3.538E-09	0.000E+00	0.000E+00	0.000E+00			
LDT1	Plug-in Hybrid	1.486E-09	3.512E-09	2.207E-07	1.455E-09	1.077E-09	8.000E-09	3.719E-09	1.280E-08	9.900E-10	2.000E-09	1.302E-09	4.292E-09	1.471E-04	4.714E-10	6.421E-10			
LDT2	Gasoline	1.683E-08	1.061E-07	1.011E-06	3.672E-09	1.622E-09	8.000E-09	7.948E-09	1.757E-08	1.492E-09	2.000E-09	2.782E-09	6.273E-09	3.710E-04	3.994E-09	7.810E-09			
LDT2	Diesel	1.595E-08	6.820E-08	1.411E-07	3.199E-09	7.011E-09	8.000E-09	7.922E-09	2.293E-08	6.708E-09	2.000E-09	2.773E-09	1.148E-08	3.379E-04	7.407E-10	5.319E-08			
LDT2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.349E-09	1.235E-08	0.000E+00	2.000E-09	1.522E-09	3.522E-09	0.000E+00	0.000E+00	0.000E+00			
LDT2	Plug-in Hybrid	1.454E-09	3.436E-09	2.160E-07	1.424E-09	1.044E-09	8.000E-09	3.723E-09	1.277E-08	9.596E-10	2.000E-09	1.303E-09	4.263E-09	1.439E-04	4.638E-10	6.348E-10			
LHD1	Gasoline	5.935E-08	2.385E-07	1.438E-06	9.190E-09	1.898E-09	8.000E-09	7.800E-08	8.790E-08	1.746E-09	2.000E-09	2.730E-08	3.105E-08	9.287E-04	1.164E-08	1.333E-08			
LHD1	Diesel	2.478E-07	2.961E-06	7.475E-07	6.141E-09	5.676E-08	1.200E-08	7.800E-08	1.468E-07	5.431E-08	3.000E-09	2.730E-08	8.461E-08	6.487E-04	1.151E-08	1.021E-07			
LHD2	Gasoline	5.915E-08	2.835E-07	1.385E-06	1.044E-08	1.899E-09	8.000E-09	9.100E-08	1.009E-07	1.746E-09	2.000E-09	3.185E-08	3.560E-08	1.055E-03	1.210E-08	1.576E-08			
LHD2	Diesel	2.022E-07	2.046E-06	5.527E-07	7.531E-09	4.516E-08	1.200E-08	9.100E-08	1.482E-07	4.320E-08	3.000E-09	3.185E-08	7.805E-08	7.955E-04	9.393E-09	1.252E-07			
MCY	Gasoline	1.443E-06	7.029E-07	1.650E-05	1.932E-09	1.997E-09	4.000E-09	1.200E-08	1.800E-08	1.880E-09	1.000E-09	4.200E-09	7.080E-09	1.952E-04	2.059E-07	4.515E-08			
MDV	Gasoline	2.647E-08	1.520E-07	1.220E-06	4.411E-09	1.714E-09	8.000E-09	8.051E-09	1.777E-08	1.577E-09	2.000E-09	2.818E-09	6.395E-09	4.458E-04	5.684E-09	1.006E-08			
MDV	Diesel	1.258E-08	6.645E-08	1.942E-07	4.105E-09	6.184E-09	8.000E-09	7.884E-09	2.207E-08	5.917E-09	2.000E-09	2.759E-09	1.068E-08	4.336E-04	5.844E-10	6.826E-08			
MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.429E-09	1.243E-08	0.000E+00	2.000E-09	1.550E-09	3.550E-09	0.000E+00	0.000E+00	0.000E+00			
MDV	Plug-in Hybrid	1.477E-09	3.492E-09	2.195E-07	1.447E-09	1.081E-09	8.000E-09	3.717E-09	1.280E-08	9.937E-10	2.000E-09	1.301E-09	4.295E-09	1.463E-04	4.728E-10	6.488E-10			
MH	Gasoline	2.154E-07	9.013E-07	6.182E-06	1.933E-08	3.084E-09	1.200E-08	4.502E-08	6.010E-08	2.846E-09	3.000E-09	1.576E-08	2.160E-08	1.953E-03	4.052E-08	4.520E-08			
MH	Diesel	1.161E-07	4.115E-06	3.862E-07	1.026E-08	9.844E-08	1.600E-08	4.479E-08	1.592E-07	9.418E-08	4.000E-09	1.567E-08	1.139E-07	1.083E-03	5.395E-09	1.705E-07			
Motor Coach	Diesel	1.775E-07	4.329E-06	6.233E-07	1.664E-08	1.079E-07	1.200E-08	7.908E-08	1.989E-07	1.032E-07	3.000E-09	2.768E-08	1.339E-07	1.759E-03	8.243E-09	2.769E-07			
OBUS	Gasoline	6.773E-08	4.438E-07	1.527E-06	1.790E-08	9.707E-10	1.200E-08	4.480E-08	5.777E-08	8.932E-10	3.000E-09	1.568E-08	1.957E-08	1.808E-03	1.394E-08	2.307E-08			
PTO	Diesel	3.047E-07	5.643E-06	1.145E-06	2.062E-08	1.024E-07	0.000E+00	0.000E+00	1.024E-07	9.801E-08	0.000E+00	0.000E+00	9.801E-08	2.180E-03	1.415E-08	3.431E-07			
SBUS	Gasoline	4.112E-07	1.745E-06	1.011E-05	8.426E-09	3.467E-09	8.000E-09	4.492E-08	5.638E-08	3.188E-09	2.000E-09	1.572E-08	2.091E-08	8.515E-04	7.639E-08	7.512E-08			
SBUS	Diesel	7.654E-08	6.030E-06	2.238E-07	1.104E-08	3.088E-08	1.200E-08	4.492E-08	8.779E-08	2.954E-08	3.000E-09	1.572E-08	4.826E-08	1.167E-03	3.555E-09	1.837E-07			
SBUS	Natural Gas	5.225E-08	6.462E-07	1.268E-05	0.000E+00	3.674E-09	1.200E-08	4.492E-08	6.059E-08	3.378E-09	3.000E-09	1.572E-08	2.210E-08	1.299E-03	3.657E-06	2.649E-07			
T6 CAIRP Class 4	Diesel	8.785E-08	2.174E-06	3.118E-07	1.079E-08	7.440E-08	1.200E-08	4.231E-08	1.287E-07	7.118E-08	3.000E-09	1.481E-08	8.899E-08	1.140E-03	4.080E-09	1.794E-07			
T6 CAIRP Class 5	Diesel	5.993E-08	1.634E-06	2.281E-07	1.073E-08	5.444E-08	1.200E-08	4.231E-08	1.088E-07	5.208E-08	3.000E-09	1.481E-08	6.989E-08	1.134E-03	2.783E-09	1.785E-07			
T6 CAIRP Class 6	Diesel	8.556E-08	2.138E-06	3.178E-07	1.060E-08	7.668E-08	1.200E-08	4.231E-08	1.310E-07	7.336E-08	3.000E-09	1.481E-08	9.117E-08	1.121E-03	3.974E-09	1.764E-07			
T6 CAIRP Class 7	Diesel	8.481E-08	2.225E-06	2.892E-07	9.986E-09	6.942E-08	1.200E-08	4.231E-08	1.237E-07	6.642E-08	3.000E-09	1.481E-08	8.423E-08	1.055E-03	3.939E-09	1.661E-07			
T6 Instate Delivery Class 4	Diesel	5.950E-07	7.550E-06	1.563E-06	1.196E-08	2.406E-07	1.200E-08	4.756E-08	3.002E-07	2.302E-07	3.000E-09	1.665E-08	2.499E-07	1.264E-03	2.763E-08	1.990E-07			
T6 Instate Delivery Class 4	Natural Gas	1.038E-08	2.994E-07	3.246E-06	0.000E+00	6.387E-10	1.200E-08	4.756E-08	6.020E-08	5.873E-10	3.000E-09	1.665E-08	2.023E-08	1.111E-03	7.268E-07	2.265E-07			
T6 Instate Delivery Class 5	Diesel	2.552E-07	3.674E-06	6.877E-07	1.169E-08	1.001E-07	1.200E-08	4.756E-08	1.597E-07	9.578E-08	3.000E-09	1.665E-08	1.154E-07	1.236E-03	1.185E-08	1.945E-07			
T6 Instate Delivery Class 5	Natural Gas	1.038E-08	2.994E-07	3.246E-06	0.000E+00	6.387E-10	1.200E-08	4.756E-08	6.020E-08	5.873E-10	3.000E-09	1.665E-08	2.023E-08	1.109E-03	7.268E-07	2.260E-07			
T6 Instate Delivery Class 6	Diesel	4.045E-07	5.169E-06	1.064E-06	1.172E-08	1.646E-07	1.200E-08	4.756E-08	2.242E-07	1.575E-07	3.000E-09	1.665E-08	1.771E-07	1.239E-03	1.879E-08	1.951E-07			
T6 Instate Delivery Class 6	Natural Gas	1.042E-08	2.949E-07	3.257E-06	0.000E+00	6.646E-10	1.200E-08	4.756E-08	6.023E-08	6.111E-10	3.000E-09	1.665E-08	2.026E-08	1.109E-03	7.295E-07	2.262E-07			
T6 Instate Delivery Class 7	Diesel	2.682E-07	4.209E-06	7.058E-07	1.162E-08	1.136E-07	1.200E-08	4.756E-08	1.732E-07	1.087E-07	3.000E-09	1.665E-08	1.284E-07	1.229E-03	1.246E-08	1.934E-07			
T6 Instate Delivery Class 7	Natural Gas	1.152E-08	1.702E-07	3.571E-06	0.000E+00	1.390E-09	1.200E-08	4.756E-08	6.095E-08	1.278E-09	3.000E-09	1.665E-08	2.093E-08	1.089E-03	8.064E-07	2.221E-07			
T6 Instate Other Class 4	Diesel	4.866E-07	7.579E-06	1.371E-06	1.120E-08	2.477E-07	1.200E-08	4.486E-08	3.046E-07	2.370E-07	3.000E-09	1.570E-08	2.557E-07	1.184E-03	2.260E-08	1.863E-07			
T6 Instate Other Class 4	Natural Gas	7.975E-09	2.268E-07	2.831E-06	0.000E+00	5.147E-10	1.200E-08	4.486E-08	5.738E-08	4.732E-10	3.000E-09	1.570E-08	1.918E-08	9.658E-04	5.82E-07	1.969E-07			
T6 Instate Other Class 5	Diesel	1.611E-07	2.822E-06	4.797E-07	1.106E-08	8.118E-08	1.200E-08	4.486E-08	1.380E-07	7.767E-08	3.000E-09	1.570E-08	9.637E-08	1.169E-03	7.482E-09	1.841E-07			
T6 Instate Other Class 5	Natural Gas	7.945E-09	2.294E-07	2.834E-06	0.000E+00	4.990E-10	1.200E-08	4.486E-08	5.736E-08	4.588E-10	3.000E-09	1.570E-08	1.916E-08	9.646E-04	5.61E-07	1.966E-07			
T6 Instate Other Class 6	Diesel	2.680E-07	4.324E-06	7.767E-07	1.102E-08	1.403E-07	1.200E-08	4.486E-08	1.971E-07	1.342E-07	3.000E-09	1.570E-08	1.529E-07	1.165E-03	1.245E-08	1.834E-07			
T6 Instate Other Class 6	Natural Gas	7.999E-09	2.247E-07	2.829E-06	0.000E+00	5.273E-10	1.200E-08	4.486E-08	5.739E-08	4.848E-10	3.000E-09	1.570E-08	1.919E-08	9.643E-04	5.595E-07	1.966E-07			
T6 Instate Other Class 7	Diesel	2.060E-07	3.445E-06	5.549E-07	1.097E-08	1.082E-07	1.200E-08	4.486E-08	1.651E-07	1.035E-07	3.000E-09	1.570E-08	1.222E-07	1.160E-03	9.318E-09	1.826E-07			
T6 Instate Other Class 7	Natural Gas	8.631E-09	1.734E-07	2.821E-06	0.000E+00	8.648E-10	1.200E-08	4.486E-08	5.773E-08	7.952E-10	3.000E-09	1.570E-08	1.950E-08	9.313E-04	6.041E-07	1.899E-07			
T6 Instate Tractor Class 6	Diesel	2.302E-07	3.633E-06	6.739E-07	1.117E-08	1.191E-07	1.200E-08	4.486E-08	1.759E-07	1.139E-07	3.000E-09	1.570E-08	1.326E-07	1.181E-03	1.069E-08	1.858E-07			
T6 Instate Tractor Class 6																			

T6 Public Class 6	Diesel	1.216E-07	8.137E-06	2.761E-07	1.214E-08	5.174E-08	1.200E-08	4.617E-08	1.099E-07	4.951E-08	3.000E-09	1.616E-08	6.867E-08	1.283E-03	5.649E-09	2.020E-07
T6 Public Class 6	Natural Gas	1.200E-08	1.610E-07	3.090E-06	0.000E+00	1.306E-09	1.200E-08	4.617E-08	5.948E-08	1.201E-09	3.000E-09	1.616E-08	2.036E-08	1.048E-03	8.397E-07	2.137E-07
T6 Public Class 7	Diesel	1.434E-07	9.623E-06	3.016E-07	1.247E-08	6.575E-08	1.200E-08	4.617E-08	1.239E-07	6.290E-08	3.000E-09	1.616E-08	8.206E-08	1.318E-03	6.662E-09	2.074E-07
T6 Public Class 7	Natural Gas	1.240E-08	9.501E-08	3.066E-06	0.000E+00	1.619E-09	1.200E-08	4.617E-08	5.979E-08	1.489E-09	3.000E-09	1.616E-08	2.065E-08	1.067E-03	8.677E-07	2.174E-07
T6 Utility Class 5	Diesel	2.450E-08	1.270E-06	9.542E-08	1.078E-08	6.143E-09	1.200E-08	4.550E-08	6.364E-08	5.877E-09	3.000E-09	1.592E-08	2.480E-08	1.140E-03	1.138E-09	1.794E-07
T6 Utility Class 5	Natural Gas	9.343E-09	2.693E-07	2.894E-06	0.000E+00	5.178E-10	1.200E-08	4.550E-08	5.801E-08	4.761E-10	3.000E-09	1.592E-08	1.940E-08	1.011E-03	6.539E-07	2.061E-07
T6 Utility Class 6	Diesel	3.709E-08	2.079E-06	1.240E-07	1.103E-08	1.076E-08	1.200E-08	4.550E-08	6.826E-08	1.029E-08	3.000E-09	1.592E-08	2.922E-08	1.165E-03	1.723E-09	1.834E-07
T6 Utility Class 6	Natural Gas	9.343E-09	2.693E-07	2.894E-06	0.000E+00	5.178E-10	1.200E-08	4.550E-08	5.801E-08	4.761E-10	3.000E-09	1.592E-08	1.940E-08	9.948E-04	6.539E-07	2.028E-07
T6 Utility Class 7	Diesel	2.797E-08	1.915E-06	1.002E-07	1.102E-08	1.031E-08	1.200E-08	4.550E-08	6.781E-08	9.866E-09	3.000E-09	1.592E-08	2.879E-08	1.165E-03	1.299E-09	1.834E-07
T6 Utility Class 7	Natural Gas	9.343E-09	2.693E-07	2.894E-06	0.000E+00	5.178E-10	1.200E-08	4.550E-08	5.801E-08	4.761E-10	3.000E-09	1.592E-08	1.940E-08	1.001E-03	6.539E-07	2.041E-07
T6TS	Gasoline	2.145E-07	1.154E-06	4.793E-06	1.866E-08	1.897E-09	1.200E-08	4.502E-08	5.891E-08	1.749E-09	3.000E-09	1.576E-08	2.051E-08	1.886E-03	4.022E-08	4.919E-08
T7 CAIRP Class 8	Diesel	8.807E-08	3.574E-06	3.238E-07	1.515E-08	6.621E-08	3.600E-08	7.731E-08	1.795E-07	6.334E-08	9.000E-09	2.706E-08	9.940E-08	1.601E-03	4.091E-09	2.520E-07
T7 CAIRP Class 8	Natural Gas	1.319E-08	2.616E-07	4.596E-06	0.000E+00	1.736E-09	3.600E-08	7.410E-08	1.118E-07	1.596E-09	9.000E-09	2.593E-08	3.653E-08	1.181E-03	9.233E-07	2.408E-07
T7 NNOOS Class 8	Diesel	1.451E-07	3.842E-06	5.721E-07	1.525E-08	1.094E-07	3.600E-08	7.818E-08	2.236E-07	1.047E-07	9.000E-09	2.736E-08	1.411E-07	1.611E-03	6.741E-09	2.537E-07
T7 NOOS Class 8	Diesel	1.029E-07	3.739E-06	3.750E-07	1.515E-08	7.379E-08	3.600E-08	7.747E-08	1.873E-07	7.060E-08	9.000E-09	2.711E-08	1.067E-07	1.601E-03	4.777E-09	2.520E-07
T7 Other Port Class 8	Diesel	1.191E-07	4.459E-06	3.802E-07	1.631E-08	3.111E-08	3.600E-08	9.404E-08	1.611E-07	2.976E-08	9.000E-09	3.291E-08	7.168E-08	1.723E-03	5.533E-09	2.713E-07
T7 POAK Class 8	Diesel	1.474E-07	4.965E-06	4.689E-07	1.632E-08	4.140E-08	3.600E-08	9.605E-08	1.735E-07	3.961E-08	9.000E-09	3.362E-08	8.223E-08	1.725E-03	6.845E-09	2.716E-07
T7 POAK Class 8	Natural Gas	1.696E-08	7.040E-07	1.102E-05	0.000E+00	1.355E-09	3.600E-08	8.524E-08	1.226E-07	1.246E-09	9.000E-09	2.983E-08	4.008E-08	1.492E-03	1.187E-06	3.042E-07
T7 Public Class 8	Diesel	1.564E-07	1.162E-05	5.060E-07	1.859E-08	7.508E-08	3.600E-08	1.190E-07	2.301E-07	7.184E-08	9.000E-09	4.166E-08	1.225E-07	1.965E-03	7.263E-09	3.093E-07
T7 Public Class 8	Natural Gas	2.622E-08	7.744E-07	1.074E-05	0.000E+00	2.424E-09	3.600E-08	1.060E-07	1.444E-07	2.228E-09	9.000E-09	3.709E-08	4.832E-08	1.670E-03	1.835E-06	3.404E-07
T7 Single Concrete/Transit Mix ClaDiesel	Diesel	1.741E-08	1.118E-06	9.040E-08	1.620E-08	1.920E-08	3.600E-08	8.116E-08	1.364E-07	1.837E-08	9.000E-09	2.841E-08	5.578E-08	1.712E-03	8.088E-10	2.695E-07
T7 Single Concrete/Transit Mix ClaNatural Gas	Natural Gas	1.517E-08	3.591E-07	6.650E-06	0.000E+00	1.828E-09	3.600E-08	8.072E-08	1.186E-07	1.681E-09	9.000E-09	2.825E-08	3.893E-08	1.266E-03	1.062E-06	2.581E-07
T7 Single Dump Class 8	Diesel	1.661E-07	4.858E-06	5.826E-07	1.606E-08	9.306E-08	3.600E-08	8.782E-08	2.169E-07	8.904E-08	9.000E-09	3.074E-08	1.288E-07	1.698E-03	7.714E-09	2.673E-07
T7 Single Dump Class 8	Natural Gas	1.513E-08	4.267E-07	7.638E-06	0.000E+00	1.669E-09	3.600E-08	8.267E-08	1.203E-07	1.535E-09	9.000E-09	2.894E-08	3.947E-08	1.313E-03	1.059E-06	2.677E-07
T7 Single Other Class 8	Diesel	1.578E-07	4.328E-06	5.790E-07	1.605E-08	9.653E-08	3.600E-08	8.757E-08	2.201E-07	9.235E-08	9.000E-09	3.065E-08	1.320E-07	1.697E-03	7.332E-09	2.671E-07
T7 Single Other Class 8	Natural Gas	1.514E-08	4.291E-07	7.564E-06	0.000E+00	1.677E-09	3.600E-08	8.270E-08	1.204E-07	1.542E-09	9.000E-09	2.894E-08	3.949E-08	1.300E-03	1.060E-06	2.650E-07
T7 SWCV Class 8	Diesel	4.378E-08	8.244E-06	1.202E-07	3.889E-08	1.019E-08	3.600E-08	2.100E-07	2.562E-07	9.754E-09	9.000E-09	7.350E-08	9.225E-08	4.111E-03	2.033E-09	6.471E-07
T7 SWCV Class 8	Natural Gas	1.688E-07	3.353E-06	2.632E-05	0.000E+00	3.508E-09	3.600E-08	2.100E-07	2.495E-07	3.226E-09	9.000E-09	7.350E-08	8.573E-08	1.804E-03	6.107E-06	3.677E-07
T7 Tractor Class 8	Diesel	1.488E-07	4.878E-06	5.392E-07	1.511E-08	8.693E-08	3.600E-08	8.538E-08	2.083E-07	8.317E-08	9.000E-09	2.988E-08	1.220E-07	1.597E-03	6.911E-09	2.514E-07
T7 Tractor Class 8	Natural Gas	1.423E-08	5.637E-07	9.756E-06	0.000E+00	1.241E-09	3.600E-08	7.846E-08	1.157E-07	1.141E-09	9.000E-09	2.746E-08	3.760E-08	1.222E-03	9.956E-07	2.491E-07
T7 Utility Class 8	Diesel	4.099E-08	2.462E-06	1.983E-07	1.681E-08	1.136E-08	3.600E-08	9.840E-08	1.458E-07	1.087E-08	9.000E-09	3.444E-08	5.431E-08	1.777E-03	1.904E-09	2.797E-07
T7IS	Gasoline	1.239E-06	5.424E-06	4.552E-05	2.326E-08	2.698E-09	2.000E-08	9.164E-08	1.143E-07	2.512E-09	5.000E-09	3.208E-08	3.959E-08	2.350E-03	1.849E-07	1.721E-07
UBUS	Gasoline	7.870E-09	5.339E-08	5.669E-07	1.046E-08	7.171E-10	8.290E-09	9.238E-08	1.014E-07	6.594E-10	2.073E-09	3.233E-08	3.506E-08	1.057E-03	2.635E-09	6.278E-09
UBUS	Diesel	1.616E-07	5.421E-06	3.110E-07	1.442E-08	9.040E-09	3.179E-08	1.100E-07	1.508E-07	8.649E-09	7.948E-09	3.850E-08	5.510E-08	1.524E-03	7.505E-09	2.398E-07
UBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	5.500E-08	9.100E-08	0.000E+00	9.000E-09	1.925E-08	2.825E-08	0.000E+00	0.000E+00	0.000E+00

Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC202x Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHEV calculated based on total VMT.

g/mile																	2.205E-03	
Vehicle Category	Fuel	ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM10_Total	X	W	W	PM2.5_Total	CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	VMT	% of VMT
All Other Buses	Diesel	0.01334618	0.50024792	0.08127863	0.00971388	0.00364617	0.012	0.0461373	6.18E-02	0.00348844	0.003	0.01614806	2.26E-02	1025.81784	0.0006199	0.16161802	68,924	0.350%
All Other Buses	Natural Gas	0.01215435	0.07922587	3.41832093	0	0.00172963	0	0.00172963	5.99E-02	0.00159033	0.003	0.01614806	2.07E-02	899.167166	0.85066713	0.18330111	1,276	0.006%
LDA	Gasoline	0.002851	0.01949512	0.43035809	0.00221937	0.00054791	0.008	0.00681325	1.54E-02	0.00050379	0.002	0.00238464	4.89E-03	224.49575	0.0009123	0.00292407	5,833,280	29.613%
LDA	Diesel	0.00534929	0.02493682	0.14221828	0.00175617	0.00172176	0.008	0.00686473	1.66E-02	0.00164727	0.002	0.00240265	6.05E-03	185.337833	0.00024846	0.02920005	3,702	0.019%
LDA	Electricity	0	0	0	0	0	0	0.008	0.00438639	1.24E-02	0	0.002	0.00153524	3.54E-03	0	0	875,819	4.446%
LDA	Plug-in Hybrid	0.00113655	0.0026759	0.16817577	0.00110839	0.00022918	0.008	0.00391252	1.21E-02	0.00021072	0.002	0.00136938	3.58E-03	112.116585	0.00032605	0.00040088	281,077	1.427%
LDT1	Gasoline	0.00364626	0.02358625	0.4839539	0.00258139	0.00060168	0.008	0.00826558	1.69E-02	0.00055322	0.002	0.00289295	5.45E-03	261.115255	0.00109815	0.00320762	705,649	3.582%
LDT1	Diesel	0.01195255	0.02660206	0.12328523	0.00318971	0.00397563	0.008	0.00816438	2.01E-02	0.00380365	0.002	0.00285753	8.66E-03	336.626688	0.00055517	0.05303567	8	0.000%
LDT1	Electricity	0	0	0	0	0	0	0.008	0.00438913	1.24E-02	0	0.002	0.00153619	3.54E-03	0	0	22,339	0.113%
LDT1	Plug-in Hybrid	0.00112403	0.00264642	0.16631491	0.00109616	0.00020227	0.008	0.00391998	1.21E-02	0.00018637	0.002	0.00137199	3.56E-03	110.87982	0.00032177	0.00039468	15,547	0.079%
LDT2	Gasoline	0.00408575	0.02393031	0.51886024	0.00267386	0.00056277	0.008	0.008199	1.68E-02	0.00051744	0.002	0.00286965	5.39E-03	270.468513	0.00124763	0.00321541	6,086,991	30.901%
LDT2	Diesel	0.01200888	0.02721418	0.12479376	0.00237512	0.00402062	0.008	0.00819041	2.02E-02	0.00384669	0.002	0.00286665	8.71E-03	250.658766	0.00055779	0.03949139	23,202	0.118%
LDT2	Electricity	0	0	0	0	0	0	0.008	0.00439111	1.24E-02	0	0.002	0.00153689	3.54E-03	0	0	179,285	0.910%
LDT2	Plug-in Hybrid	0.00113006	0.00266063	0.16719846	0.00110202	0.00021531	0.008	0.00392025	1.21E-02	0.00019797	0.002	0.00137209	3.57E-03	111.473079	0.00032203	0.00039313	161,728	0.821%
LHD1	Gasoline	0.00401723	0.01892416	0.59248327	0.00744321	0.00128291	0.008	0.07800002	8.73E-02	0.00117959	0.002	0.02730001	3.05E-02	752.902897	0.00114083	0.00150956	306,742	1.557%
LHD1	Diesel	0.08711647	0.25752873	0.218704	0.00570546	0.01803987	0.012	0.07800002	1.08E-01	0.01725948	0.003	0.02730001	4.76E-02	602.127171	0.00404639	0.09486538	184,764	0.938%
LHD1	Electricity	0	0	0	0	0	0	0.008	0.03900001	4.70E-02	0	0.002	0.01365	1.57E-02	0	0	293,604	1.490%
LHD2	Gasoline	0.00363114	0.02238521	0.5955606	0.00837847	0.00125894	0.008	0.09100003	1.00E-01	0.00115755	0.002	0.03185001	3.50E-02	847.507512	0.00105504	0.00198533	34,025	0.173%
LHD2	Diesel	0.10100701	0.30857275	0.25530291	0.00664075	0.02097521	0.012	0.09100003	1.24E-01	0.02006783	0.003	0.03185001	5.49E-02	700.832769	0.00469158	0.11041649	84,902	0.431%
LHD2	Electricity	0	0	0	0	0	0	0.008	0.04550001	5.35E-02	0	0.002	0.015925	1.79E-02	0	0	70,466	0.358%
MCY	Gasoline	0.74799415	0.45790234	9.35911672	0.00183236	0.00214499	0.004	0.012	1.81E-02	0.00199978	0.001	0.0042	7.20E-03	185.348611	0.12531148	0.03468199	92,749	0.471%
MDV	Gasoline	0.0042214	0.02487057	0.52993193	0.00324077	0.00056762	0.008	0.00830071	1.69E-02	0.0005219	0.002	0.00290525	5.43E-03	327.813049	0.00128192	0.00328642	3,533,747	17.939%
MDV	Diesel	0.00433423	0.00960663	0.13590663	0.00309904	0.00099079	0.008	0.00832006	1.73E-02	0.00094793	0.002	0.00291202	5.86E-03	327.057576	0.00020132	0.05152805	38,378	0.195%
MDV	Electricity	0	0	0	0	0	0	0.008	0.00439636	1.24E-02	0	0.002	0.00153873	3.54E-03	0	0	163,991	0.833%
MDV	Plug-in Hybrid	0.00112942	0.0026591	0.16710448	0.0011014	0.00021653	0.008	0.00392365	1.21E-02	0.00019909	0.002	0.00137328	3.57E-03	111.409612	0.00032287	0.00039551	102,722	0.521%
MH	Gasoline	0.01168099	0.10412525	0.15995233	0.01922673	0.00149118	0.012	0.04501744	5.85E-02	0.00137109	0.003	0.0157561	2.01E-02	1944.84098	0.00407457	0.01236424	10,018	0.051%
MH	Diesel	0.07869023	2.45036835	0.22641149	0.01031241	0.01973011	0.016	0.04478528	8.05E-02	0.01887659	0.004	0.01567485	3.86E-02	1088.32296	0.00365501	0.17146572	5,325	0.027%
Motor Coach	Diesel	0.01066015	0.99200931	0.03802564	0.0147306	0.02441419	0.012	0.08072442	1.17E-01	0.02335805	0.003	0.02825355	5.46E-02	1555.59987	0.00049514	0.24508539	10,276	0.052%
OBUS	Gasoline	0.01787828	0.11892206	0.36181651	0.01527091	0.00131878	0.012	0.0447987	5.81E-02	0.00121257	0.003	0.01567955	1.99E-02	1544.69812	0.00414751	0.0081918	5,871	0.030%
OBUS	Electricity	0	0	0	0	0	0	0.012	0.02239935	3.44E-02	0.003	0.00783977	1.08E-02	0	0	0	4,910	0.025%
PTO	Diesel	0.01696958	2.82616395	0.20685869	0.01729902	0.00453598	0	0	4.54E-03	0.00433975	0	0	4.34E-03	1826.8337	0.00078819	0.28781839	3,984	0.020%
PTO	Electricity	0	0	0	0	0	0	0	0.00E+00	0	0	0	0.00E+00	0	0	0	2,334	0.012%
SBUS	Gasoline	0.00891594	0.08805086	0.18504588	0.00709853	0.00123556	0.008	0.04491714	5.42E-02	0.00113605	0.002	0.015721	1.89E-02	718.037049	0.00204542	0.00902638	3,828	0.019%
SBUS	Diesel	0.01702162	0.74961055	0.08025546	0.01008918	0.00514978	0.012	0.04491714	6.21E-02	0.00492701	0.003	0.015721	2.36E-02	1065.45089	0.00079961	0.16786222	2,634	0.013%
SBUS	Electricity	0	0	0	0	0	0.00950219	0.02245857	3.20E-02	0	0.00237555	0.0078605	1.02E-02	0	0	0	3,060	0.016%
SBUS	Natural Gas	0.04022974	0.34141862	8.72643145	0	0.00367426	0.012	0.04491714	6.06E-02	0.00337835	0.003	0.015721	2.21E-02	1149.67628	2.81562607	0.23436903	164	0.001%
T6 CAIRP Class 4	Diesel	0.00565164	0.19295927	0.02857247	0.00973324	0.00565363	0.012	0.04231382	6.00E-02	0.00540906	0.003	0.01480984	2.32E-02	1027.86209	0.0002625	0.16194009	82	0.000%
T6 CAIRP Class 4	Electricity	0	0	0	0	0	0	0.012	0.02115691	3.32E-02	0	0.003	0.00740492	1.04E-02	0	0	87	0.000%
T6 CAIRP Class 5	Diesel	0.00559067	0.19462736	0.02846544	0.00974389	0.00563724	0.012	0.04231382	6.00E-02	0.00539337	0.003	0.01480984	2.32E-02	1028.98716	0.00025967	0.16211735	113	0.001%
T6 CAIRP Class 5	Electricity	0	0	0	0	0	0	0.012	0.02115691	3.32E-02	0	0.003	0.00740492	1.04E-02	0	0	118	0.001%
T6 CAIRP Class 6	Diesel	0.00554233	0.18788336	0.02822002	0.00970387	0.00558146	0.012	0.04231382	5.99E-02	0.00534001	0.003	0.01480984	2.31E-02	1024.7602	0.00025743	0.16145139	291	0.001%
T6 CAIRP Class 6	Electricity	0	0	0	0	0	0	0.012	0.02115691	3.32E-02	0	0.003	0.00740492	1.04E-02	0	0	313	0.002%
T6 CAIRP Class 7	Diesel	0.00581962	0.20301557	0.02983924	0.00856452	0.00584039	0.012	0.04231382	6.02E-02	0.00558774	0.003	0.01480984	2.34E-02	904.441338	0.00027031	0.1424951	2,959	0.015%
T6 CAIRP Class 7	Electricity	0	0	0	0	0	0	0.012	0.02115691	3.32E-02	0	0.003	0.00740492	1.04E-02	0	0	834	0.004%
T6 Instate Delivery Class 4	Diesel	0.00900783	0.44240884	0.06282248	0.0101609	0.00306976	0.012	0.04756293	6.26E-02	0.00293696	0.003	0.01664703	2.26E-02	1073.02442	0.00041839	0.16905543	9,201	0.047%
T6 Instate Delivery Class 4	Electricity	0	0	0	0	0	0	0.012	0.02378147	3.58E-02	0	0.003	0.00832351	1.13E-02	0	0	6,673	0.034%
T6 Instate Delivery Class 4	Natural Gas	0.01245779	0.06157767	3.81375222	0	0.00200607	0.012	0.04756293	6.16E-02	0.00184451	0.003	0.01664703	2.15E-02	1009.86019	0.87190429	0.20586661	114	

T6 Instate Other Class 7	Electricity	0	0	0	0	0	0.012	0.02243187	3.44E-02	0	0.003	0.00785116	1.09E-02	0	0	0	5,744	0.029%
T6 Instate Other Class 7	Natural Gas	0.00933529	0.10882084	2.73823765	0	0.00123	0.012	0.04486375	5.81E-02	0.00113094	0.003	0.01570231	1.98E-02	903.084435	0.65336466	0.18410008	245	0.001%
T6 Instate Tractor Class 6	Diesel	0.00673036	0.28981446	0.04532752	0.00985221	0.00366586	0.012	0.04486375	6.05E-02	0.00350728	0.003	0.01570231	2.22E-02	1040.42582	0.00031261	0.16391951	376	0.002%
T6 Instate Tractor Class 6	Electricity	0	0	0	0	0	0.012	0.02243187	3.44E-02	0	0.003	0.00785116	1.09E-02	0	0	0	315	0.002%
T6 Instate Tractor Class 6	Natural Gas	0.00994384	0.0536772	2.67324689	0	0.00154656	0.012	0.04486375	5.84E-02	0.00142201	0.003	0.01570231	2.01E-02	877.139052	0.69595632	0.17881053	5	0.000%
T6 Instate Tractor Class 7	Diesel	0.00765668	0.59127735	0.05782909	0.00917782	0.00443371	0.012	0.04486375	6.13E-02	0.00424191	0.003	0.01570231	2.29E-02	969.208271	0.00035563	0.15269916	4,137	0.021%
T6 Instate Tractor Class 7	Electricity	0	0	0	0	0	0.012	0.02243187	3.44E-02	0	0.003	0.00785116	1.09E-02	0	0	0	733	0.004%
T6 Instate Tractor Class 7	Natural Gas	0.00934477	0.10728491	2.73057675	0	0.00123394	0.012	0.04486375	5.81E-02	0.00113456	0.003	0.01570231	1.98E-02	886.025433	0.65402818	0.18062208	80	0.000%
T6 OOS Class 4	Diesel	0.00602887	0.24395281	0.0288823	0.0090856	0.00598727	0.012	0.04231382	6.03E-02	0.00572827	0.003	0.01480984	2.35E-02	959.468946	0.00028003	0.15116472	94	0.000%
T6 OOS Class 5	Diesel	0.00558614	0.23682194	0.02779053	0.00909784	0.00577202	0.012	0.04231382	6.01E-02	0.00552233	0.003	0.01480984	2.33E-02	960.762343	0.00025946	0.1513685	129	0.001%
T6 OOS Class 6	Diesel	0.00562774	0.23050878	0.02780688	0.00904892	0.00576519	0.012	0.04231382	6.01E-02	0.00551579	0.003	0.01480984	2.33E-02	955.595447	0.00026139	0.15055445	338	0.002%
T6 OOS Class 7	Diesel	0.0056729	0.2358367	0.02909449	0.00820031	0.00592554	0.012	0.04231382	6.02E-02	0.0056692	0.003	0.01480984	2.35E-02	865.979778	0.00026349	0.13643547	2,459	0.012%
T6 Public Class 4	Diesel	0.02302736	1.16363448	0.0790161	0.01059514	0.00706104	0.012	0.04616939	6.52E-02	0.00675558	0.003	0.01615929	2.59E-02	1118.88149	0.00106956	0.17628023	784	0.004%
T6 Public Class 4	Electricity	0	0	0	0	0	0.012	0.0230847	3.51E-02	0	0.003	0.00807964	1.11E-02	0	0	0	459	0.002%
T6 Public Class 4	Natural Gas	0.01259505	0.0624283	3.05733314	0	0.00177402	0.012	0.04616939	5.99E-02	0.00163115	0.003	0.01615929	2.08E-02	989.210771	0.88151115	0.20165709	54	0.000%
T6 Public Class 5	Diesel	0.01743166	0.81685325	0.07147426	0.01058307	0.00510399	0.012	0.04616939	6.33E-02	0.0048832	0.003	0.01615929	2.40E-02	1117.60707	0.00080966	0.17607945	2,685	0.014%
T6 Public Class 5	Electricity	0	0	0	0	0	0.012	0.0230847	3.51E-02	0	0.003	0.00807964	1.11E-02	0	0	0	1,576	0.008%
T6 Public Class 5	Natural Gas	0.0124412	0.08787252	3.06913493	0	0.00165306	0.012	0.04616939	5.98E-02	0.00151993	0.003	0.01615929	2.07E-02	1003.27567	0.87074326	0.20452431	227	0.001%
T6 Public Class 6	Diesel	0.01910918	0.97474483	0.0728299	0.01055032	0.00594445	0.012	0.04616939	6.41E-02	0.00568729	0.003	0.01615929	2.48E-02	1114.14821	0.00088757	0.1755345	1,585	0.008%
T6 Public Class 6	Electricity	0	0	0	0	0	0.012	0.0230847	3.51E-02	0	0.003	0.00807964	1.11E-02	0	0	0	910	0.005%
T6 Public Class 6	Natural Gas	0.01254584	0.07060273	3.06245233	0	0.00173514	0.012	0.04616939	5.99E-02	0.0015954	0.003	0.01615929	2.08E-02	989.725046	0.87806669	0.20176193	112	0.001%
T6 Public Class 7	Diesel	0.01632499	0.85682853	0.06377335	0.01043953	0.00529261	0.012	0.04616939	6.35E-02	0.00506366	0.003	0.01615929	2.42E-02	1102.44841	0.00075825	0.1736912	4,501	0.023%
T6 Public Class 7	Electricity	0	0	0	0	0	0.012	0.0230847	3.51E-02	0	0.003	0.00807964	1.11E-02	0	0	0	2,333	0.012%
T6 Public Class 7	Natural Gas	0.01258407	0.06427951	3.05950544	0	0.00176521	0.012	0.04616939	5.99E-02	0.00162304	0.003	0.01615929	2.08E-02	996.552238	0.88074249	0.20315369	349	0.002%
T6 Utility Class 5	Diesel	0.00516336	0.20143095	0.03605799	0.00973195	0.0023529	0.012	0.0454967	5.98E-02	0.00225112	0.003	0.01592385	2.12E-02	1027.72607	0.00023982	0.16191866	175	0.001%
T6 Utility Class 5	Electricity	0	0	0	0	0	0.012	0.02274835	3.47E-02	0	0.003	0.00796192	1.10E-02	0	0	0	189	0.001%
T6 Utility Class 5	Natural Gas	0.01113687	0.05410456	2.74533962	0	0.0016363	0.012	0.0454967	5.91E-02	0.00150452	0.003	0.01592385	2.04E-02	916.208669	0.77945454	0.18677513	1	0.000%
T6 Utility Class 6	Diesel	0.0051625	0.1951802	0.03605199	0.00972862	0.00232369	0.012	0.0454967	5.98E-02	0.00222317	0.003	0.01592385	2.11E-02	1027.3747	0.00023978	0.1618633	33	0.000%
T6 Utility Class 6	Electricity	0	0	0	0	0	0.012	0.02274835	3.47E-02	0	0.003	0.00796192	1.10E-02	0	0	0	36	0.000%
T6 Utility Class 6	Natural Gas	0.01113687	0.05410456	2.74533962	0	0.0016363	0.012	0.0454967	5.91E-02	0.00150452	0.003	0.01592385	2.04E-02	916.355932	0.77945454	0.18680515	0	0.000%
T6 Utility Class 7	Diesel	0.00510715	0.19007141	0.03566546	0.00972543	0.00230936	0.012	0.0454967	5.98E-02	0.00220946	0.003	0.01592385	2.11E-02	1027.03692	0.00023721	0.16181009	44	0.000%
T6 Utility Class 7	Electricity	0	0	0	0	0	0.012	0.02274835	3.47E-02	0	0.003	0.00796192	1.10E-02	0	0	0	51	0.000%
T6 Utility Class 7	Natural Gas	0.01113687	0.05410456	2.74533962	0	0.0016363	0.012	0.0454967	5.91E-02	0.00150452	0.003	0.01592385	2.04E-02	916.412599	0.77945454	0.1868167	0	0.000%
T6 TS	Gasoline	0.01262177	0.08210157	0.20555964	0.01543612	0.00149035	0.012	0.04501744	5.85E-02	0.00137032	0.003	0.0157561	2.01E-02	1561.40971	0.00322473	0.00728003	32,720	0.166%
T6 TS	Electricity	0	0	0	0	0	0.012	0.02250872	3.45E-02	0	0.003	0.00787805	1.09E-02	0	0	0	26,746	0.136%
T7 CAIRP Class 8	Diesel	0.01150415	1.21651699	0.03903093	0.01216446	0.03017864	0.03600001	0.08158414	1.48E-01	0.02887313	0.009	0.02855445	6.46E-02	1284.60657	0.00053434	0.20239029	18,679	0.095%
T7 CAIRP Class 8	Electricity	0	0	0	0	0	0.03600001	0.04094388	7.69E-02	0	0.009	0.01433036	2.33E-02	0	0	0	5,008	0.025%
T7 CAIRP Class 8	Natural Gas	0.01336169	0.15337108	2.89316157	0	0.00196489	0.03600001	0.0815554	1.20E-01	0.00180665	0.009	0.0285439	3.94E-02	1024.78338	0.93516719	0.2089088	34	0.000%
T7 NNOOS Class 8	Diesel	0.01117313	1.3319583	0.03796197	0.01165528	0.0295415	0.03600001	0.08160938	1.47E-01	0.02826355	0.009	0.02856328	6.58E-02	1230.83551	0.00051896	0.19391864	28,165	0.143%
T7 NNOOS Class 8	Diesel	0.01151972	1.3693814	0.03906448	0.01164598	0.03127624	0.03600001	0.08161705	1.49E-01	0.02992324	0.009	0.02856597	6.75E-02	1229.85427	0.00053506	0.19376404	10,234	0.052%
T7 Other Port Class 8	Diesel	0.01001227	1.23108955	0.06334857	0.01302458	0.01648651	0.03600001	0.09400111	1.46E-01	0.01577331	0.009	0.03290039	5.77E-02	1375.43887	0.00046504	0.21670095	1,988	0.010%
T7 Other Port Class 8	Electricity	0	0	0	0	0	0.03600001	0.04707212	8.31E-02	0	0.009	0.01647524	2.55E-02	0	0	0	470	0.002%
T7 POAK Class 8	Diesel	0.01027911	1.2984531	0.06503691	0.01299459	0.0174648	0.03600001	0.09380232	1.47E-01	0.01670928	0.009	0.03283081	5.85E-02	1372.27115	0.00047744	0.21620188	6,410	0.033%
T7 POAK Class 8	Electricity	0	0	0	0	0	0.03600001	0.04706132	8.31E-02	0	0.009	0.01647146	2.55E-02	0	0	0	1,259	0.006%
T7 POAK Class 8	Natural Gas	0.0167608	0.17252782	4.97691357	0	0.00252429	0.03600001	0.09380232	1.32E-01	0.00232099	0.009	0.03283081	4.42E-02	1151.85156	1.17306642	0.23481248	14	0.000%
T7 Public Class 8	Diesel	0.03832255	2.79130452	0.16959946	0.01582657	0.01302325	0.03600001	0.10680577	1.56E-01	0.01245987	0.009	0.03738202	5.88E-02	1671.33765	0.00177998	0.26331993	10,722	0.054%
T7 Public Class 8	Electricity	0	0	0	0	0	0.03600001	0.05425694	9.03E-02	0	0.009	0.01898993	2.80E-02	0	0	0	4,716	0.024%
T7 Public Class 8	Natural Gas	0.02455703	0.31652779	8.33101697	0	0.00320577	0.03600001	0.10497811	1.44E-01	0.00294759	0.009	0.03674234	4.87E-02	1484.16534	1.71871365	0.30255681	80	0.000%
T7 Single Concrete/Transit Mix Class 8	Diesel	0.00872336	0.83069974	0.04438677	0.01386452	0.01414638	0.03600001	0.0881318	1.38E-01	0.01353441	0.009	0.03084613	5.34E-02	1464.13859	0.00040518	0.23067563	1,831	0.009%
T7 Single Concrete/Transit Mix Class 8	Electricity	0	0	0	0	0	0.03600001	0.04438002	8.04E-02	0	0.009	0.01553301	2.45E-02	0	0	0	2,011	0.010%
T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.01524528	0.16574612	4.07094137	0	0.002225072	0.03600001	0.08812786	1.26E-01	0.00206945	0.009	0.03084475	4.19E-02	1127.04033	1.06699698	0.22975454	113	0.001%
T7 Single Dump Class 8	Diesel	0.01111939	1.18501995	0.06229165	0.01444519	0.01830659	0.03600001	0.08592572	1.40E-01	0.01751466	0.009	0.030074	5.66E-02	1525.46007	0.00051647	0.24033686	7,176	0.036%
T7 Single Dump Class 8	Electricity	0	0	0	0	0	0.03600001	0.04434463	8.03E-02	0	0.009	0.01552062	2.45E-02	0	0	0	4,280	0.022%
T7 Single Dump Class 8	Natural Gas	0.01522128	0.22136462	4.83168539	0	0.00212676	0.03600001	0.08606633	1.24E-01	0.00195547	0.009	0.03012321	4.11E-02	1166.85009	1.06531697	0.23787002	431	0.002%
T7 Single Other Class 8	Diesel	0.01155941	1.23537527	0.06467355	0.01456978	0.01910795	0.03600001	0.08509749	1.40E-01	0.01828135	0.009	0.02978412	5.71E-02	1538.61698				



Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC202x Categor

Units: miles/day for CVMT and EVMT, trips/

		lbs/Mile														1.0E-06		
													CO2(Pavley+ AACQ)_RUNE					
Vehicle Category	Fuel	ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM10_Total	PM2.5_RUNE	PM2.5_PMT	PM2.5_PMB	PM2.5_Total	X	CH4_RUNEX	N2O_RUNEX		
All Other Buses	Diesel	2.942E-05	1.103E-03	1.792E-04	2.142E-05	8.038E-06	2.646E-05	1.017E-04	1.362E-04	7.691E-06	6.614E-06	3.560E-05	4.990E-05	2.262E+00	1.367E-06	3.563E-04		
All Other Buses	Natural Gas	2.680E-05	1.747E-04	7.536E-03	0.000E+00	3.813E-06	2.646E-05	1.017E-04	1.320E-04	3.506E-06	6.614E-06	3.560E-05	4.572E-05	1.982E+00	1.875E-03	4.041E-04		
LDA	Gasoline	6.285E-06	4.298E-05	9.488E-04	4.893E-06	1.208E-06	1.764E-05	1.502E-05	3.387E-05	1.111E-06	4.409E-06	5.257E-06	1.078E-05	4.949E-01	2.011E-06	6.446E-06		
LDA	Diesel	1.179E-05	5.498E-05	3.135E-04	3.872E-06	3.796E-06	1.764E-05	1.513E-05	3.657E-05	3.632E-06	4.409E-06	5.297E-06	1.334E-05	4.086E-01	5.478E-07	6.437E-05		
LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.670E-06	2.731E-05	0.000E+00	4.409E-06	3.385E-06	7.794E-06	0.000E+00	0.000E+00	0.000E+00		
LDA	Plug-in Hybrid	2.506E-06	5.899E-06	3.708E-04	2.444E-06	5.053E-07	1.764E-05	8.626E-06	2.677E-05	4.646E-07	4.409E-06	3.019E-06	7.893E-06	2.472E-01	7.188E-07	8.838E-07		
LDT1	Gasoline	8.039E-06	5.200E-05	1.067E-03	5.691E-06	1.326E-06	1.764E-05	1.822E-05	3.719E-05	1.220E-06	4.409E-06	6.378E-06	1.201E-05	5.757E-01	2.421E-06	7.072E-06		
LDT1	Diesel	2.635E-05	5.865E-05	2.718E-04	7.032E-06	8.765E-06	1.764E-05	1.800E-05	4.440E-05	8.386E-06	4.409E-06	6.300E-06	1.909E-05	7.421E-01	1.224E-06	1.169E-04		
LDT1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.676E-06	2.731E-05	0.000E+00	4.409E-06	3.387E-06	7.796E-06	0.000E+00	0.000E+00	0.000E+00		
LDT1	Plug-in Hybrid	2.478E-06	5.834E-06	3.667E-04	2.417E-06	4.469E-07	1.764E-05	8.642E-06	2.673E-05	4.109E-07	4.409E-06	3.025E-06	7.845E-06	2.444E-01	7.094E-07	8.701E-07		
LDT2	Gasoline	9.007E-06	5.276E-05	1.144E-03	5.895E-06	1.241E-06	1.764E-05	1.808E-05	3.695E-05	1.141E-06	4.409E-06	6.326E-06	1.188E-05	5.963E-01	2.751E-06	7.089E-06		
LDT2	Diesel	2.647E-05	6.000E-05	2.751E-04	5.236E-06	8.864E-06	1.764E-05	1.806E-05	4.456E-05	8.480E-06	4.409E-06	6.320E-06	1.921E-05	5.526E-01	1.230E-06	8.706E-05		
LDT2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.681E-06	2.732E-05	0.000E+00	4.409E-06	3.388E-06	7.797E-06	0.000E+00	0.000E+00	0.000E+00		
LDT2	Plug-in Hybrid	2.491E-06	5.866E-06	3.686E-04	2.430E-06	4.747E-07	1.764E-05	8.643E-06	2.675E-05	4.364E-07	4.409E-06	3.025E-06	7.871E-06	2.458E-01	7.099E-07	8.667E-07		
LHD1	Gasoline	8.856E-06	4.172E-05	1.306E-03	1.641E-05	2.828E-06	1.764E-05	1.720E-04	1.924E-04	2.601E-06	4.409E-06	6.019E-05	6.720E-05	1.660E+00	2.515E-06	3.328E-06		
LHD1	Diesel	1.921E-04	5.677E-04	4.822E-04	1.258E-05	3.977E-05	2.646E-05	1.720E-04	2.382E-04	3.805E-05	6.614E-06	6.019E-05	1.048E-04	1.327E+00	8.921E-06	2.091E-04		
LHD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	8.598E-05	1.036E-04	0.000E+00	4.409E-06	3.009E-05	3.450E-05	0.000E+00	0.000E+00	0.000E+00		
LHD2	Gasoline	8.005E-06	4.935E-05	1.313E-03	1.847E-05	2.775E-06	1.764E-05	2.006E-04	2.210E-04	2.552E-06	4.409E-06	7.022E-05	7.718E-05	1.868E+00	2.326E-06	4.377E-06		
LHD2	Diesel	2.227E-04	6.803E-04	5.628E-04	1.464E-05	4.624E-05	2.646E-05	2.006E-04	2.733E-04	4.424E-05	6.614E-06	7.022E-05	1.211E-04	1.545E+00	1.034E-05	2.434E-04		
LHD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	1.003E-04	1.179E-04	0.000E+00	4.409E-06	3.511E-05	3.952E-05	0.000E+00	0.000E+00	0.000E+00		
MCY	Gasoline	1.649E-03	1.009E-03	2.063E-02	4.040E-06	4.729E-06	8.818E-06	2.646E-05	4.000E-05	4.409E-06	2.205E-06	9.259E-06	1.587E-05	4.086E-01	2.763E-04	7.646E-05		
MDV	Gasoline	9.307E-06	5.483E-05	1.168E-03	7.145E-06	1.251E-06	1.764E-05	1.830E-05	3.719E-05	1.151E-06	4.409E-06	6.405E-06	1.196E-05	7.227E-01	2.826E-06	7.245E-06		
MDV	Diesel	9.555E-06	2.118E-05	2.996E-04	6.832E-06	2.184E-06	1.764E-05	1.834E-05	3.816E-05	2.090E-06	4.409E-06	6.420E-06	1.292E-05	7.210E-01	4.438E-07	1.136E-04		
MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.764E-05	9.692E-06	2.733E-05	0.000E+00	4.409E-06	3.392E-06	7.801E-06	0.000E+00	0.000E+00	0.000E+00		
MDV	Plug-in Hybrid	2.490E-06	5.862E-06	3.684E-04	2.428E-06	4.774E-07	1.764E-05	8.650E-06	2.676E-05	4.389E-07	4.409E-06	3.028E-06	7.876E-06	2.456E-01	7.118E-07	8.719E-07		
MH	Gasoline	2.575E-05	2.296E-04	3.526E-04	4.239E-05	3.287E-06	2.646E-05	9.925E-05	1.290E-04	3.023E-06	6.614E-06	3.474E-05	4.437E-05	4.288E+00	8.983E-06	2.726E-05		
MH	Diesel	1.735E-04	5.402E-03	4.991E-04	2.273E-05	4.350E-05	3.527E-05	9.873E-05	1.775E-04	4.162E-05	8.818E-06	3.456E-05	8.499E-05	2.399E+00	8.058E-06	3.780E-04		
Motor Coach	Diesel	2.350E-05	2.187E-03	8.383E-05	3.248E-05	5.382E-05	2.646E-05	1.780E-04	2.582E-04	5.150E-05	6.614E-06	6.229E-05	1.204E-04	3.429E+00	1.092E-06	5.403E-04		
OBUS	Gasoline	3.941E-05	2.622E-04	7.977E-04	3.367E-05	2.907E-06	2.646E-05	9.876E-05	1.281E-04	2.673E-06	6.614E-06	3.457E-05	4.385E-05	3.405E+00	9.144E-06	1.806E-05		
OBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.938E-05	7.584E-05	0.000E+00	6.614E-06	1.728E-05	2.390E-05	0.000E+00	0.000E+00	0.000E+00		
PTO	Diesel	3.741E-05	6.231E-03	4.560E-04	3.814E-05	1.000E-05	0.000E+00	0.000E+00	1.000E-05	9.567E-06	0.000E+00	0.000E+00	9.567E-06	4.027E+00	1.738E-06	6.345E-04		
PTO	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00		
SBUS	Gasoline	1.966E-05	1.941E-04	4.080E-04	1.565E-05	2.724E-06	1.764E-05	9.902E-05	1.194E-04	2.505E-06	4.409E-06	3.466E-05	4.157E-05	1.583E+00	4.509E-06	1.990E-05		
SBUS	Diesel	3.753E-05	1.653E-03	1.769E-04	2.224E-05	1.135E-05	2.646E-05	9.902E-05	1.368E-04	1.086E-05	6.614E-06	3.466E-05	5.213E-05	2.349E+00	1.743E-06	3.701E-04		
SBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.095E-05	4.951E-05	7.046E-05	0.000E+00	5.237E-06	1.733E-05	2.257E-05	0.000E+00	0.000E+00	0.000E+00		
SBUS	Natural Gas	8.869E-05	7.527E-04	1.924E-02	0.000E+00	8.100E-06	2.646E-05	9.902E-05	1.336E-04	7.448E-06	6.614E-06	3.466E-05	4.872E-05	2.535E+00	6.207E-03	5.167E-04		
T6 CAIRP Class 4	Diesel	1.246E-05	4.254E-04	6.299E-05	2.146E-05	1.246E-05	2.646E-05	9.329E-05	1.322E-04	1.192E-05	6.614E-06	3.265E-05	5.119E-05	2.266E+00	5.787E-07	3.570E-04		
T6 CAIRP Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.664E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00		
T6 CAIRP Class 5	Diesel	1.233E-05	4.291E-04	6.275E-05	2.148E-05	1.243E-05	2.646E-05	9.329E-05	1.322E-04	1.189E-05	6.614E-06	3.265E-05	5.115E-05	2.269E+00	5.725E-07	3.574E-04		
T6 CAIRP Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.664E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00		
T6 CAIRP Class 6	Diesel	1.222E-05	4.142E-04	6.221E-05	2.139E-05	1.230E-05	2.646E-05	9.329E-05	1.320E-04	1.177E-05	6.614E-06	3.265E-05	5.104E-05	2.259E+00	5.675E-07	3.559E-04		
T6 CAIRP Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.664E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00		
T6 CAIRP Class 7	Diesel	1.283E-05	4.476E-04	6.578E-05	1.888E-05	1.288E-05	2.646E-05	9.329E-05	1.326E-04	1.232E-05	6.614E-06	3.265E-05	5.158E-05	1.994E+00	5.959E-07	3.141E-04		
T6 CAIRP Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.664E-05	7.310E-05	0.000E+00	6.614E-06	1.632E-05	2.294E-05	0.000E+00	0.000E+00	0.000E+00		
T6 Instate Delivery Class 4	Diesel	1.986E-05	9.753E-04	1.385E-04	2.240E-05	6.768E-06	2.646E-05	1.049E-04	1.381E-04	6.475E-06	6.614E-06	3.670E-05	4.979E-05	2.366E+00	9.224E-07	3.727E-04		
T6 Instate Delivery Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.243E-05	7.888E-05	0.000E+00	6.614E-06	1.835E-05	2.496E-05	0.000E+00	0.000E+00	0.000E+00		
T6 Instate Delivery Class 4	Natural Gas	2.746E-05	1.358E-04	8.408E-03	0.000E+00	4.423E-06	2.646E-05	1.049E-04	1.357E-04	4.066E-06	6.614E-06	3.670E-05	4.738E-05	2.226E+00	1.922E-03	4.539E-04		
T6 Instate Delivery Class 5	Diesel	1.520E-05	9.169E-04	1.260E-04	2.247E-05	4.898E-06	2.646E-05	1.049E-04	1.362E-04	4.686E-06	6.614E-06	3.670E-05	4.800E-05	2.373E+00	7.058E-07	3.739E-04		
T6 Instate Delivery Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.243E-05	7.888E-05	0.000E+00	6.614E-06	1.835E-05	2.496E-05	0.000E+00	0.000E+00	0.000E+00		
T6 Instate Delivery Class 5	Natural Gas	2.745E-05	1.378E-04	8.403E-03	0.000E+00	4.411E-06	2.646E-05	1.049E-04	1.357E-04	4.056E-06								

T6 Instate Other Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.945E-05	7.591E-05	0.000E+00	6.614E-06	1.731E-05	2.392E-05	0.000E+00	0.000E+00	0.000E+00
T6 Instate Other Class 7	Natural Gas	2.058E-05	2.399E-04	6.037E-03	0.000E+00	2.712E-06	2.646E-05	9.891E-05	1.281E-04	2.493E-06	6.614E-06	3.462E-05	4.372E-05	1.991E+00	1.440E-03	4.059E-04
T6 Instate Tractor Class 6	Diesel	1.484E-05	6.389E-04	9.993E-05	2.172E-05	8.082E-06	2.646E-05	9.891E-05	1.334E-04	7.732E-06	6.614E-06	3.462E-05	4.896E-05	2.294E+00	6.892E-07	3.614E-04
T6 Instate Tractor Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.945E-05	7.591E-05	0.000E+00	6.614E-06	1.731E-05	2.392E-05	0.000E+00	0.000E+00	0.000E+00
T6 Instate Tractor Class 6	Natural Gas	2.192E-05	1.183E-04	5.893E-03	0.000E+00	3.410E-06	2.646E-05	9.891E-05	1.288E-04	3.135E-06	6.614E-06	3.462E-05	4.437E-05	1.934E+00	1.534E-03	3.942E-04
T6 Instate Tractor Class 7	Diesel	1.688E-05	1.304E-03	1.275E-04	2.023E-05	9.775E-06	2.646E-05	9.891E-05	1.351E-04	9.352E-06	6.614E-06	3.462E-05	5.058E-05	2.137E+00	7.840E-07	3.366E-04
T6 Instate Tractor Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.945E-05	7.591E-05	0.000E+00	6.614E-06	1.731E-05	2.392E-05	0.000E+00	0.000E+00	0.000E+00
T6 Instate Tractor Class 7	Natural Gas	2.060E-05	2.365E-04	6.020E-03	0.000E+00	2.720E-06	2.646E-05	9.891E-05	1.281E-04	2.501E-06	6.614E-06	3.462E-05	4.373E-05	1.953E+00	1.442E-03	3.982E-04
T6 OOS Class 4	Diesel	1.329E-05	5.378E-04	6.367E-05	2.003E-05	1.320E-05	2.646E-05	9.329E-05	1.329E-04	1.263E-05	6.614E-06	3.265E-05	5.189E-05	2.115E+00	6.173E-07	3.333E-04
T6 OOS Class 5	Diesel	1.232E-05	5.221E-04	6.127E-05	2.006E-05	1.273E-05	2.646E-05	9.329E-05	1.325E-04	1.217E-05	6.614E-06	3.265E-05	5.144E-05	2.118E+00	5.720E-07	3.337E-04
T6 OOS Class 6	Diesel	1.241E-05	5.082E-04	6.130E-05	1.995E-05	1.271E-05	2.646E-05	9.329E-05	1.325E-04	1.216E-05	6.614E-06	3.265E-05	5.142E-05	2.107E+00	5.763E-07	3.319E-04
T6 OOS Class 7	Diesel	1.251E-05	5.199E-04	6.414E-05	1.808E-05	1.306E-05	2.646E-05	9.329E-05	1.328E-04	1.250E-05	6.614E-06	3.265E-05	5.176E-05	1.909E+00	5.809E-07	3.008E-04
T6 Public Class 4	Diesel	5.077E-05	2.565E-03	1.742E-04	2.336E-05	1.557E-05	2.646E-05	1.018E-04	1.438E-04	1.489E-05	6.614E-06	3.562E-05	5.713E-05	2.467E+00	2.358E-06	3.886E-04
T6 Public Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.735E-05	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
T6 Public Class 4	Natural Gas	2.777E-05	1.376E-04	6.740E-03	0.000E+00	3.911E-06	2.646E-05	1.018E-04	1.322E-04	3.596E-06	6.614E-06	3.562E-05	4.583E-05	2.181E+00	1.943E-03	4.446E-04
T6 Public Class 5	Diesel	3.843E-05	1.801E-03	1.576E-04	2.333E-05	1.125E-05	2.646E-05	1.018E-04	1.395E-04	1.077E-05	6.614E-06	3.562E-05	5.300E-05	2.464E+00	1.785E-06	3.882E-04
T6 Public Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.735E-05	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
T6 Public Class 5	Natural Gas	2.743E-05	1.937E-04	6.766E-03	0.000E+00	3.644E-06	2.646E-05	1.018E-04	1.319E-04	3.351E-06	6.614E-06	3.562E-05	4.559E-05	2.212E+00	1.920E-03	4.509E-04
T6 Public Class 6	Diesel	4.213E-05	2.149E-03	1.606E-04	2.326E-05	1.311E-05	2.646E-05	1.018E-04	1.413E-04	1.254E-05	6.614E-06	3.562E-05	5.478E-05	2.456E+00	1.957E-06	3.870E-04
T6 Public Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.735E-05	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
T6 Public Class 6	Natural Gas	2.766E-05	1.557E-04	6.751E-03	0.000E+00	3.825E-06	2.646E-05	1.018E-04	1.321E-04	3.517E-06	6.614E-06	3.562E-05	4.576E-05	2.182E+00	1.936E-03	4.448E-04
T6 Public Class 7	Diesel	3.599E-05	1.889E-03	1.406E-04	2.301E-05	1.167E-05	2.646E-05	1.018E-04	1.399E-04	1.116E-05	6.614E-06	3.562E-05	5.340E-05	2.430E+00	1.672E-06	3.829E-04
T6 Public Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.089E-05	7.735E-05	0.000E+00	6.614E-06	1.781E-05	2.443E-05	0.000E+00	0.000E+00	0.000E+00
T6 Public Class 7	Natural Gas	2.774E-05	1.417E-04	6.745E-03	0.000E+00	3.892E-06	2.646E-05	1.018E-04	1.321E-04	3.578E-06	6.614E-06	3.562E-05	4.582E-05	2.197E+00	1.942E-03	4.479E-04
T6 Utility Class 5	Diesel	1.138E-05	4.441E-04	7.949E-05	2.146E-05	5.187E-06	2.646E-05	1.003E-04	1.319E-04	4.963E-06	6.614E-06	3.511E-05	4.668E-05	2.266E+00	5.287E-07	3.570E-04
T6 Utility Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.015E-05	7.661E-05	0.000E+00	6.614E-06	1.755E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
T6 Utility Class 5	Natural Gas	2.455E-05	1.193E-04	6.052E-03	0.000E+00	3.607E-06	2.646E-05	1.003E-04	1.304E-04	3.317E-06	6.614E-06	3.511E-05	4.504E-05	2.020E+00	1.718E-03	4.118E-04
T6 Utility Class 6	Diesel	1.138E-05	4.303E-04	7.948E-05	2.145E-05	5.123E-06	2.646E-05	1.003E-04	1.319E-04	4.901E-06	6.614E-06	3.511E-05	4.662E-05	2.265E+00	5.286E-07	3.568E-04
T6 Utility Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.015E-05	7.661E-05	0.000E+00	6.614E-06	1.755E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
T6 Utility Class 6	Natural Gas	2.455E-05	1.193E-04	6.052E-03	0.000E+00	3.607E-06	2.646E-05	1.003E-04	1.304E-04	3.317E-06	6.614E-06	3.511E-05	4.504E-05	2.020E+00	1.718E-03	4.118E-04
T6 Utility Class 7	Diesel	1.126E-05	4.190E-04	7.863E-05	2.144E-05	5.091E-06	2.646E-05	1.003E-04	1.318E-04	4.871E-06	6.614E-06	3.511E-05	4.659E-05	2.264E+00	5.230E-07	3.567E-04
T6 Utility Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	5.015E-05	7.661E-05	0.000E+00	6.614E-06	1.755E-05	2.417E-05	0.000E+00	0.000E+00	0.000E+00
T6 Utility Class 7	Natural Gas	2.455E-05	1.193E-04	6.052E-03	0.000E+00	3.607E-06	2.646E-05	1.003E-04	1.304E-04	3.317E-06	6.614E-06	3.511E-05	4.504E-05	2.020E+00	1.718E-03	4.119E-04
T6 TS	Gasoline	2.783E-05	1.810E-04	4.532E-04	3.403E-05	3.286E-06	2.646E-05	9.925E-05	1.290E-04	3.021E-06	6.614E-06	3.474E-05	4.437E-05	3.442E+00	7.109E-06	1.605E-05
T6 TS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.646E-05	4.962E-05	7.608E-05	0.000E+00	6.614E-06	1.737E-05	2.398E-05	0.000E+00	0.000E+00	0.000E+00
T7 CAIRP Class 8	Diesel	2.536E-05	2.682E-03	8.605E-05	2.682E-05	6.653E-05	7.937E-05	1.799E-04	3.258E-04	6.365E-05	1.984E-05	6.295E-05	1.464E-04	2.832E+00	1.178E-06	4.462E-04
T7 CAIRP Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.026E-05	1.696E-04	0.000E+00	1.984E-05	3.159E-05	5.143E-05	0.000E+00	0.000E+00	0.000E+00
T7 CAIRP Class 8	Natural Gas	2.946E-05	3.381E-04	6.378E-03	0.000E+00	4.332E-06	7.937E-05	1.798E-04	6.235E-04	3.983E-06	1.984E-05	6.293E-05	8.675E-05	2.259E+00	2.062E-03	4.606E-04
T7 NNQOS Class 8	Diesel	2.463E-05	2.936E-03	8.369E-05	2.570E-05	6.513E-05	7.937E-05	1.799E-04	3.244E-04	6.231E-05	1.984E-05	6.297E-05	1.451E-04	2.713E+00	1.144E-06	4.275E-04
T7 NNQOS Class 8	Diesel	2.540E-05	3.019E-03	8.612E-05	2.567E-05	6.895E-05	7.937E-05	1.799E-04	3.283E-04	6.597E-05	1.984E-05	6.298E-05	1.488E-04	2.711E+00	1.180E-06	4.272E-04
T7 Other Port Class 8	Diesel	2.207E-05	2.714E-03	1.397E-04	2.871E-05	3.635E-05	7.937E-05	2.072E-04	3.229E-04	3.477E-05	1.984E-05	7.253E-05	1.271E-04	3.032E+00	1.025E-06	4.777E-04
T7 Other Port Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	1.038E-04	1.831E-04	0.000E+00	1.984E-05	3.632E-05	5.616E-05	0.000E+00	0.000E+00	0.000E+00
T7 POAK Class 8	Diesel	2.266E-05	2.863E-03	1.434E-04	2.865E-05	3.850E-05	7.937E-05	2.068E-04	3.247E-04	3.684E-05	1.984E-05	7.238E-05	1.291E-04	3.025E+00	1.053E-06	4.766E-04
T7 POAK Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	1.038E-04	1.831E-04	0.000E+00	1.984E-05	3.631E-05	5.615E-05	0.000E+00	0.000E+00	0.000E+00
T7 POAK Class 8	Natural Gas	3.695E-05	3.804E-04	1.097E-02	0.000E+00	5.565E-06	7.937E-05	2.068E-04	2.917E-04	5.117E-06	1.984E-05	7.238E-05	9.734E-05	2.539E+00	2.586E-03	5.177E-04
T7 Public Class 8	Diesel	8.449E-05	6.154E-03	3.739E-04	3.489E-05	2.871E-05	7.937E-05	2.355E-04	3.435E-04	2.747E-05	1.984E-05	8.241E-05	1.297E-04	3.685E+00	3.924E-06	5.805E-04
T7 Public Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	1.196E-04	1.990E-04	0.000E+00	1.984E-05	4.187E-05	6.171E-05	0.000E+00	0.000E+00	0.000E+00
T7 Public Class 8	Natural Gas	5.414E-05	6.978E-04	1.837E-02	0.000E+00	7.067E-06	7.937E-05	2.314E-04	3.179E-04	6.498E-06	1.984E-05	8.100E-05	1.073E-04	3.272E+00	3.789E-03	6.670E-04
T7 Single Concrete/Transit Mix Class 8	Diesel	1.923E-05	1.831E-03	9.786E-05	3.057E-05	3.119E-05	7.937E-05	1.943E-04	3.048E-04	2.984E-05	1.984E-05	6.800E-05	1.177E-04	3.228E+00	8.933E-07	5.085E-04
T7 Single Concrete/Transit Mix Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.784E-05	1.772E-04	0.000E+00	1.984E-05	3.424E-05	5.409E-05	0.000E+00	0.000E+00	0.000E+00
T7 Single Concrete/Transit Mix Class 8	Natural Gas	3.361E-05	3.654E-04	8.975E-03	0.000E+00	4.962E-06	7.937E-05	1.943E-04	2.786E-04	4.562E-06	1.984E-05	6.800E-05	9.240E-05	2.485E+00	2.352E-03	5.065E-04
T7 Single Dump Class 8	Diesel	2.451E-05	2.612E-03	1.373E-04	3.185E-05	4.036E-05	7.937E-05	1.894E-04	3.092E-04	3.861E-05	1.984E-05	6.630E-05	1.248E-04	3.363E+00	1.139E-06	5.298E-04
T7 Single Dump Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.937E-05	9.776E-05	1.771E-04	0.000E+00	1.984E-05	3.422E-05	5.406E-05	0.000E+00	0.000E+00	0.000E+00
T7 Single Dump Class 8	Natural Gas	3.356E-														

Source: EMFAC2021 (v1.0.2) Emission Rates

Region Type: County

Region: San Mateo

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC202x Categor

Units: miles/day for CVMT and EVMT, trips/

		MTons/Mile														CO2(Pavley+ AACQ)_RUNE			
Vehicle Category	Fuel	ROG_RUNEX	NOx_RUNEX	CO_RUNEX	SOx_RUNEX	PM10_RUNEX	PM10_PMTW	PM10_PMBW	PM10_Total	PM2.5_RUNE	PM2.5_PMT	PM2.5_PMB	PM2.5_Total	X	CH4_RUNEX	N2O_RUNEX			
All Other Buses	Diesel	1.335E-08	5.002E-07	8.128E-08	9.714E-09	3.646E-09	1.200E-08	4.614E-08	6.178E-08	3.488E-09	3.000E-09	1.615E-08	2.264E-08	1.026E-03	6.199E-10	1.616E-07			
All Other Buses	Natural Gas	1.215E-08	7.923E-08	3.418E-06	0.000E+00	1.730E-09	1.200E-08	4.614E-08	5.987E-08	1.590E-09	3.000E-09	1.615E-08	2.074E-08	8.992E-04	8.507E-07	1.833E-07			
LDA	Gasoline	2.851E-09	1.950E-08	4.304E-07	2.219E-09	5.479E-10	8.000E-09	6.813E-09	1.536E-08	5.038E-10	2.000E-09	2.385E-09	4.888E-09	2.245E-04	9.123E-10	2.924E-09			
LDA	Diesel	5.349E-09	2.494E-08	1.422E-07	1.756E-09	1.722E-09	8.000E-09	6.865E-09	1.659E-08	1.647E-09	2.000E-09	2.403E-09	6.050E-09	1.853E-04	2.485E-10	2.920E-08			
LDA	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.386E-09	1.239E-08	0.000E+00	2.000E-09	1.535E-09	3.535E-09	0.000E+00	0.000E+00	0.000E+00			
LDA	Plug-in Hybrid	1.137E-09	2.676E-09	1.682E-07	1.108E-09	2.292E-10	8.000E-09	3.913E-09	1.214E-08	2.107E-10	2.000E-09	1.369E-09	3.580E-09	1.121E-04	3.261E-10	4.009E-10			
LDT1	Gasoline	3.646E-09	2.359E-08	4.840E-07	2.581E-09	6.017E-10	8.000E-09	8.266E-09	1.687E-08	5.532E-10	2.000E-09	2.893E-09	5.446E-09	2.611E-04	1.098E-09	3.208E-09			
LDT1	Diesel	1.195E-08	2.660E-08	1.233E-07	3.190E-09	3.976E-09	8.000E-09	8.164E-09	2.014E-08	3.804E-09	2.000E-09	2.858E-09	8.661E-09	3.366E-04	5.552E-10	5.304E-08			
LDT1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.389E-09	1.239E-08	0.000E+00	2.000E-09	1.536E-09	3.536E-09	0.000E+00	0.000E+00	0.000E+00			
LDT1	Plug-in Hybrid	1.124E-09	2.646E-09	1.663E-07	1.096E-09	2.027E-10	8.000E-09	3.920E-09	1.212E-08	1.864E-10	2.000E-09	1.372E-09	3.558E-09	1.109E-04	3.218E-10	3.947E-10			
LDT2	Gasoline	4.086E-09	2.393E-08	5.189E-07	2.674E-09	5.628E-10	8.000E-09	8.199E-09	1.676E-08	5.174E-10	2.000E-09	2.870E-09	5.387E-09	2.705E-04	1.248E-09	3.215E-09			
LDT2	Diesel	1.201E-08	2.721E-08	1.248E-07	2.375E-09	4.021E-09	8.000E-09	8.190E-09	2.021E-08	3.847E-09	2.000E-09	2.867E-09	8.713E-09	2.507E-04	5.578E-10	3.949E-08			
LDT2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.391E-09	1.239E-08	0.000E+00	2.000E-09	1.537E-09	3.537E-09	0.000E+00	0.000E+00	0.000E+00			
LDT2	Plug-in Hybrid	1.130E-09	2.661E-09	1.672E-07	1.102E-09	2.153E-10	8.000E-09	3.920E-09	1.214E-08	1.980E-10	2.000E-09	1.372E-09	3.570E-09	1.115E-04	3.220E-10	3.931E-10			
LHD1	Gasoline	4.017E-09	1.892E-08	5.925E-07	7.443E-09	1.283E-09	8.000E-09	7.800E-08	8.728E-08	1.180E-09	2.000E-09	2.730E-08	3.048E-08	7.529E-04	1.141E-09	1.510E-09			
LHD1	Diesel	8.712E-08	2.575E-07	2.187E-07	5.705E-09	1.804E-08	1.200E-08	7.800E-08	1.080E-07	1.726E-08	3.000E-09	2.730E-08	4.756E-08	6.021E-04	4.046E-09	9.487E-08			
LHD1	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	3.900E-08	4.700E-08	0.000E+00	2.000E-09	1.365E-08	1.565E-08	0.000E+00	0.000E+00	0.000E+00			
LHD2	Gasoline	3.631E-09	2.239E-08	5.956E-07	8.378E-09	1.259E-09	8.000E-09	9.100E-08	1.003E-07	1.158E-09	2.000E-09	3.185E-08	3.501E-08	8.475E-04	1.055E-09	1.985E-09			
LHD2	Diesel	1.010E-07	3.086E-07	2.553E-07	6.641E-09	2.098E-08	1.200E-08	9.100E-08	1.240E-07	2.007E-08	3.000E-09	3.185E-08	5.492E-08	7.008E-04	4.692E-09	1.104E-07			
LHD2	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.550E-08	5.350E-08	0.000E+00	2.000E-09	1.593E-08	1.793E-08	0.000E+00	0.000E+00	0.000E+00			
MCY	Gasoline	7.480E-07	4.579E-07	9.359E-06	1.832E-09	2.145E-09	4.000E-09	1.200E-08	1.814E-08	2.000E-09	1.000E-09	4.200E-09	7.200E-09	1.853E-04	1.253E-07	3.468E-08			
MDV	Gasoline	4.221E-09	2.487E-08	5.299E-07	3.241E-09	5.676E-10	8.000E-09	8.301E-09	1.687E-08	5.219E-10	2.000E-09	2.905E-09	5.427E-09	3.278E-04	1.282E-09	3.286E-09			
MDV	Diesel	4.334E-09	9.607E-09	1.359E-07	3.099E-09	9.908E-10	8.000E-09	8.320E-09	1.731E-08	9.479E-10	2.000E-09	2.912E-09	5.860E-09	3.271E-04	2.013E-10	5.153E-08			
MDV	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.000E-09	4.396E-09	1.240E-08	0.000E+00	2.000E-09	1.539E-09	3.539E-09	0.000E+00	0.000E+00	0.000E+00			
MDV	Plug-in Hybrid	1.129E-09	2.659E-09	1.671E-07	1.101E-09	2.165E-10	8.000E-09	3.924E-09	1.214E-08	1.991E-10	2.000E-09	1.373E-09	3.572E-09	1.114E-04	3.229E-10	3.955E-10			
MH	Gasoline	1.168E-08	1.041E-07	1.600E-07	1.923E-08	1.491E-09	1.200E-08	4.502E-08	5.851E-08	1.371E-09	3.000E-09	1.576E-08	2.013E-08	1.945E-03	4.075E-09	1.236E-08			
MH	Diesel	7.869E-08	2.450E-06	2.264E-07	1.031E-08	1.973E-08	1.600E-08	4.479E-08	8.052E-08	1.888E-08	4.000E-09	1.567E-08	3.855E-08	1.088E-03	3.655E-09	1.715E-07			
Motor Coach	Diesel	1.066E-08	9.920E-07	3.803E-08	1.473E-08	2.441E-08	1.200E-08	8.072E-08	1.171E-07	2.336E-08	3.000E-09	2.825E-08	5.461E-08	1.556E-03	4.951E-10	2.451E-07			
OBUS	Gasoline	1.788E-08	1.189E-07	3.618E-07	1.527E-08	1.319E-09	1.200E-08	4.480E-08	5.812E-08	1.213E-09	3.000E-09	1.568E-08	1.989E-08	1.545E-03	4.148E-09	8.192E-09			
OBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.240E-08	3.440E-08	0.000E+00	3.000E-09	7.840E-09	1.084E-08	0.000E+00	0.000E+00	0.000E+00			
PTO	Diesel	1.697E-08	2.826E-06	2.069E-07	1.730E-08	4.536E-09	0.000E+00	0.000E+00	4.536E-09	4.340E-09	0.000E+00	0.000E+00	4.340E-09	1.827E-03	7.882E-10	2.878E-07			
PTO	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00			
SBUS	Gasoline	8.916E-09	8.805E-08	1.850E-07	7.099E-09	1.236E-09	8.000E-09	4.492E-08	5.415E-08	1.136E-09	2.000E-09	1.572E-08	1.886E-08	7.180E-04	2.045E-09	9.026E-09			
SBUS	Diesel	1.702E-08	7.496E-07	8.026E-08	1.009E-08	5.150E-09	1.200E-08	4.492E-08	6.207E-08	4.927E-09	3.000E-09	1.572E-08	2.365E-08	1.065E-03	7.906E-10	1.679E-07			
SBUS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.502E-09	2.246E-08	3.196E-08	0.000E+00	2.376E-09	7.860E-09	1.024E-08	0.000E+00	0.000E+00	0.000E+00			
SBUS	Natural Gas	4.023E-08	3.414E-07	8.726E-06	0.000E+00	3.674E-09	1.200E-08	4.492E-08	6.059E-08	3.378E-09	3.000E-09	1.572E-08	2.210E-08	1.150E-03	2.816E-06	2.344E-07			
T6 CAIRP Class 4	Diesel	5.652E-09	1.930E-07	2.857E-08	9.733E-09	5.654E-09	1.200E-08	4.231E-08	5.997E-08	5.409E-09	3.000E-09	1.481E-08	3.222E-08	1.028E-03	2.625E-10	1.619E-07			
T6 CAIRP Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	3.000E-09	7.405E-09	1.040E-08	0.000E+00	0.000E+00	0.000E+00			
T6 CAIRP Class 5	Diesel	5.591E-09	1.946E-07	2.847E-08	9.744E-09	5.637E-09	1.200E-08	4.231E-08	5.995E-08	5.393E-09	3.000E-09	1.481E-08	3.230E-08	1.029E-03	2.597E-10	1.621E-07			
T6 CAIRP Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	3.000E-09	7.405E-09	1.040E-08	0.000E+00	0.000E+00	0.000E+00			
T6 CAIRP Class 6	Diesel	5.542E-09	1.879E-07	2.822E-08	9.704E-09	5.581E-09	1.200E-08	4.231E-08	5.990E-08	5.340E-09	3.000E-09	1.481E-08	2.315E-08	1.025E-03	2.574E-10	1.615E-07			
T6 CAIRP Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	3.000E-09	7.405E-09	1.040E-08	0.000E+00	0.000E+00	0.000E+00			
T6 CAIRP Class 7	Diesel	5.820E-09	2.030E-07	2.984E-08	8.565E-09	5.840E-09	1.200E-08	4.231E-08	6.015E-08	5.588E-09	3.000E-09	1.481E-08	2.340E-08	9.044E-04	2.703E-10	1.425E-07			
T6 CAIRP Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.116E-08	3.316E-08	0.000E+00	3.000E-09	7.405E-09	1.040E-08	0.000E+00	0.000E+00	0.000E+00			
T6 Instate Delivery Class 4	Diesel	9.008E-09	4.424E-07	6.282E-08	1.016E-08	3.070E-09	1.200E-08	4.756E-08	6.263E-08	2.937E-09	3.000E-09	1.665E-08	2.258E-08	1.073E-03	4.184E-10	1.691E-07			
T6 Instate Delivery Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.378E-08	3.578E-08	0.000E+00	3.000E-09	8.324E-09	1.132E-08	0.000E+00	0.000E+00	0.000E+00			
T6 Instate Delivery Class 4	Natural Gas	1.246E-08	6.158E-08	3.814E-06	0.000E+00	2.006E-09	1.2												

T6 Instate Other Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.243E-08	3.443E-08	0.000E+00	3.000E-09	7.851E-09	1.085E-08	0.000E+00	0.000E+00	0.000E+00
T6 Instate Other Class 7	Natural Gas	9.335E-09	1.088E-07	2.738E-06	0.000E+00	1.230E-09	1.200E-08	4.486E-08	5.809E-08	1.131E-09	3.000E-09	1.570E-08	1.983E-08	9.031E-04	6.534E-07	1.841E-07
T6 Instate Tractor Class 6	Diesel	6.730E-09	2.898E-07	4.533E-08	9.852E-09	3.666E-09	1.200E-08	4.486E-08	6.053E-08	3.507E-09	3.000E-09	1.570E-08	2.221E-08	1.040E-03	3.126E-10	1.639E-07
T6 Instate Tractor Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.243E-08	3.443E-08	0.000E+00	3.000E-09	7.851E-09	1.085E-08	0.000E+00	0.000E+00	0.000E+00
T6 Instate Tractor Class 6	Natural Gas	9.944E-09	5.368E-08	2.673E-06	0.000E+00	1.547E-09	1.200E-08	4.486E-08	5.841E-08	1.422E-09	3.000E-09	1.570E-08	2.012E-08	8.771E-04	6.960E-07	1.788E-07
T6 Instate Tractor Class 7	Diesel	7.657E-09	5.913E-07	5.783E-08	9.178E-09	4.434E-09	1.200E-08	4.486E-08	6.130E-08	4.242E-09	3.000E-09	1.570E-08	2.294E-08	9.692E-04	3.556E-10	1.527E-07
T6 Instate Tractor Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.243E-08	3.443E-08	0.000E+00	3.000E-09	7.851E-09	1.085E-08	0.000E+00	0.000E+00	0.000E+00
T6 Instate Tractor Class 7	Natural Gas	9.345E-09	1.073E-07	2.731E-06	0.000E+00	1.234E-09	1.200E-08	4.486E-08	5.810E-08	1.135E-09	3.000E-09	1.570E-08	1.984E-08	8.860E-04	6.540E-07	1.806E-07
T6 OOS Class 4	Diesel	6.029E-09	2.440E-07	2.888E-08	9.086E-09	5.987E-09	1.200E-08	4.231E-08	6.030E-08	5.728E-09	3.000E-09	1.481E-08	2.354E-08	9.595E-04	2.800E-10	1.512E-07
T6 OOS Class 5	Diesel	5.586E-09	2.368E-07	2.779E-08	9.098E-09	5.772E-09	1.200E-08	4.231E-08	6.009E-08	5.522E-09	3.000E-09	1.481E-08	2.333E-08	9.608E-04	2.595E-10	1.514E-07
T6 OOS Class 6	Diesel	5.628E-09	2.305E-07	2.781E-08	9.049E-09	5.765E-09	1.200E-08	4.231E-08	6.008E-08	5.516E-09	3.000E-09	1.481E-08	2.333E-08	9.556E-04	2.614E-10	1.506E-07
T6 OOS Class 7	Diesel	5.673E-09	2.358E-07	2.909E-08	8.200E-09	5.926E-09	1.200E-08	4.231E-08	6.024E-08	5.669E-09	3.000E-09	1.481E-08	2.348E-08	8.660E-04	2.635E-10	1.364E-07
T6 Public Class 4	Diesel	2.303E-08	1.164E-06	7.902E-08	1.060E-08	7.061E-09	1.200E-08	4.617E-08	6.523E-08	6.756E-09	3.000E-09	1.616E-08	2.591E-08	1.119E-03	1.070E-09	1.763E-07
T6 Public Class 4	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.508E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
T6 Public Class 4	Natural Gas	1.260E-08	6.243E-08	3.057E-06	0.000E+00	1.774E-09	1.200E-08	4.617E-08	5.994E-08	1.631E-09	3.000E-09	1.616E-08	2.079E-08	9.892E-04	8.815E-07	2.017E-07
T6 Public Class 5	Diesel	1.743E-08	8.169E-07	7.147E-08	1.058E-08	5.104E-09	1.200E-08	4.617E-08	6.327E-08	4.883E-09	3.000E-09	1.616E-08	2.404E-08	1.118E-03	8.097E-10	1.761E-07
T6 Public Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.508E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
T6 Public Class 5	Natural Gas	1.244E-08	8.878E-08	3.069E-06	0.000E+00	1.653E-09	1.200E-08	4.617E-08	5.982E-08	1.520E-09	3.000E-09	1.616E-08	2.068E-08	1.003E-03	8.707E-07	2.045E-07
T6 Public Class 6	Diesel	1.911E-08	9.747E-07	7.283E-08	1.055E-08	5.944E-09	1.200E-08	4.617E-08	6.411E-08	5.687E-09	3.000E-09	1.616E-08	2.485E-08	1.114E-03	8.876E-10	1.755E-07
T6 Public Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.508E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
T6 Public Class 6	Natural Gas	1.255E-08	7.060E-08	3.062E-06	0.000E+00	1.735E-09	1.200E-08	4.617E-08	5.990E-08	1.595E-09	3.000E-09	1.616E-08	2.075E-08	9.897E-04	8.781E-07	2.018E-07
T6 Public Class 7	Diesel	1.632E-08	8.568E-07	6.377E-08	1.044E-08	5.293E-09	1.200E-08	4.617E-08	6.346E-08	5.064E-09	3.000E-09	1.616E-08	2.422E-08	1.102E-03	7.583E-10	1.737E-07
T6 Public Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.308E-08	3.508E-08	0.000E+00	3.000E-09	8.080E-09	1.108E-08	0.000E+00	0.000E+00	0.000E+00
T6 Public Class 7	Natural Gas	1.258E-08	6.428E-08	3.060E-06	0.000E+00	1.765E-09	1.200E-08	4.617E-08	5.993E-08	1.623E-09	3.000E-09	1.616E-08	2.078E-08	9.966E-04	8.807E-07	2.032E-07
T6 Utility Class 5	Diesel	5.163E-09	2.014E-07	3.606E-08	9.732E-09	2.353E-09	1.200E-08	4.550E-08	5.985E-08	2.251E-09	3.000E-09	1.592E-08	2.117E-08	1.028E-03	2.398E-10	1.619E-07
T6 Utility Class 5	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.275E-08	3.475E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
T6 Utility Class 5	Natural Gas	1.114E-08	5.410E-08	2.745E-06	0.000E+00	1.636E-09	1.200E-08	4.550E-08	5.913E-08	1.505E-09	3.000E-09	1.592E-08	2.043E-08	9.162E-04	7.795E-07	1.868E-07
T6 Utility Class 6	Diesel	5.162E-09	1.952E-07	3.605E-08	9.729E-09	2.324E-09	1.200E-08	4.550E-08	5.982E-08	2.223E-09	3.000E-09	1.592E-08	2.115E-08	1.027E-03	2.398E-10	1.619E-07
T6 Utility Class 6	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.275E-08	3.475E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
T6 Utility Class 6	Natural Gas	1.114E-08	5.410E-08	2.745E-06	0.000E+00	1.636E-09	1.200E-08	4.550E-08	5.913E-08	1.505E-09	3.000E-09	1.592E-08	2.043E-08	9.164E-04	7.795E-07	1.868E-07
T6 Utility Class 7	Diesel	5.107E-09	1.901E-07	3.567E-08	9.725E-09	2.309E-09	1.200E-08	4.550E-08	5.981E-08	2.209E-09	3.000E-09	1.592E-08	2.113E-08	1.027E-03	2.372E-10	1.618E-07
T6 Utility Class 7	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.275E-08	3.475E-08	0.000E+00	3.000E-09	7.962E-09	1.096E-08	0.000E+00	0.000E+00	0.000E+00
T6 Utility Class 7	Natural Gas	1.114E-08	5.410E-08	2.745E-06	0.000E+00	1.636E-09	1.200E-08	4.550E-08	5.913E-08	1.505E-09	3.000E-09	1.592E-08	2.043E-08	9.164E-04	7.795E-07	1.868E-07
T6 TS	Gasoline	1.262E-08	8.210E-08	2.056E-07	1.544E-08	1.490E-09	1.200E-08	4.502E-08	5.851E-08	1.370E-09	3.000E-09	1.576E-08	2.013E-08	1.561E-03	3.225E-09	7.280E-09
T6 TS	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.200E-08	2.251E-08	3.451E-08	0.000E+00	3.000E-09	7.878E-09	1.088E-08	0.000E+00	0.000E+00	0.000E+00
T7 CAIRP Class 8	Diesel	1.150E-08	1.217E-06	3.903E-08	1.216E-08	3.018E-08	3.600E-08	8.158E-08	1.478E-07	2.887E-08	9.000E-09	2.855E-08	6.643E-08	1.285E-03	5.343E-10	2.024E-07
T7 CAIRP Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.094E-08	7.694E-08	0.000E+00	9.000E-09	1.433E-08	2.333E-08	0.000E+00	0.000E+00	0.000E+00
T7 CAIRP Class 8	Natural Gas	1.336E-08	1.534E-07	2.893E-06	0.000E+00	1.965E-09	3.600E-08	8.155E-08	1.195E-07	1.807E-09	9.000E-09	2.854E-08	3.935E-08	1.025E-03	9.352E-07	2.089E-07
T7 NNQOS Class 8	Diesel	1.117E-08	1.332E-06	3.796E-08	1.166E-08	2.954E-08	3.600E-08	8.161E-08	1.472E-07	2.826E-08	9.000E-09	2.856E-08	6.583E-08	1.231E-03	5.190E-10	1.939E-07
T7 NNQOS Class 8	Electricity	1.152E-08	1.369E-06	3.906E-08	1.165E-08	3.128E-08	3.600E-08	8.162E-08	1.489E-07	2.992E-08	9.000E-09	2.857E-08	6.749E-08	1.230E-03	5.351E-10	1.938E-07
T7 Other Port Class 8	Diesel	1.001E-08	1.231E-06	6.335E-08	1.302E-08	1.649E-08	3.600E-08	9.400E-08	1.465E-07	1.577E-08	9.000E-09	3.290E-08	5.676E-08	1.375E-03	4.650E-10	2.167E-07
T7 Other Port Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.707E-08	8.307E-08	0.000E+00	9.000E-09	1.648E-08	2.548E-08	0.000E+00	0.000E+00	0.000E+00
T7 POAK Class 8	Diesel	1.028E-08	1.298E-06	6.504E-08	1.299E-08	1.746E-08	3.600E-08	9.380E-08	1.473E-07	1.671E-08	9.000E-09	3.283E-08	5.854E-08	1.372E-03	4.774E-10	2.162E-07
T7 POAK Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.706E-08	8.306E-08	0.000E+00	9.000E-09	1.647E-08	2.547E-08	0.000E+00	0.000E+00	0.000E+00
T7 POAK Class 8	Natural Gas	1.676E-08	1.725E-07	4.977E-06	0.000E+00	2.524E-09	3.600E-08	9.380E-08	1.323E-07	2.321E-09	9.000E-09	3.283E-08	4.415E-08	1.152E-03	1.173E-06	2.348E-07
T7 Public Class 8	Diesel	3.832E-08	2.791E-06	1.696E-07	1.583E-08	1.302E-08	3.600E-08	1.068E-07	1.558E-07	1.246E-08	9.000E-09	3.738E-08	5.884E-08	1.671E-03	1.780E-09	2.633E-07
T7 Public Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	5.426E-08	9.026E-08	0.000E+00	9.000E-09	1.899E-08	2.799E-08	0.000E+00	0.000E+00	0.000E+00
T7 Public Class 8	Natural Gas	2.456E-08	3.165E-07	8.331E-06	0.000E+00	3.206E-09	3.600E-08	1.050E-07	1.442E-07	2.948E-09	9.000E-09	3.674E-08	4.869E-08	1.484E-03	1.719E-06	3.026E-07
T7 Single Concrete/Transit Mix Class 8	Diesel	8.723E-09	8.307E-07	4.439E-08	1.386E-08	1.415E-08	3.600E-08	8.813E-08	1.383E-07	1.353E-08	9.000E-09	3.085E-08	5.338E-08	1.464E-03	4.052E-10	2.307E-07
T7 Single Concrete/Transit Mix Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.438E-08	8.038E-08	0.000E+00	9.000E-09	1.553E-08	2.453E-08	0.000E+00	0.000E+00	0.000E+00
T7 Single Concrete/Transit Mix Class 8	Natural Gas	1.525E-08	1.657E-07	4.071E-06	0.000E+00	2.251E-09	3.600E-08	8.813E-08	1.264E-07	2.069E-09	9.000E-09	3.084E-08	4.191E-08	1.127E-03	1.067E-06	2.298E-07
T7 Single Dump Class 8	Diesel	1.112E-08	1.185E-06	6.229E-08	1.445E-08	1.831E-08	3.600E-08	8.593E-08	1.402E-07	1.751E-08	9.000E-09	3.007E-08	5.659E-08	1.525E-03	5.165E-10	2.403E-07
T7 Single Dump Class 8	Electricity	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-08	4.434E-08	8.034E-08	0.000E+00	9.000E-09	1.552E-08	2.452E-08	0.000E+00	0.000E+00	0.000E+00
T7 Single Dump Class 8	Natural Gas	1.522E														

City Limits - With CAP	2019	2030	2040	2045
Residential built environment	114,620	74,750	36,430	390
Commercial/ industrial built environment	83,660	62,080	46,240	28,700
On-road transportation	276,560	134,800	40,730	12,020
Off-road equipment	14,400	20,100	19,480	20,470
Rail	4,440	1,670	1,880	2,000
Solid waste generation	21,910	13,310	13,040	12,580
Landfill	4,180	4,470	3,660	3,310
Water and wastewater	1,660	1,820	2,020	2,150
Land use and sequestration	-1,050	-1,050	-1,050	-1,050
<b>Total</b>	<b>520,380</b>	<b>311,950</b>	<b>162,430</b>	<b>80,570</b>
<i>Point sources</i>	<i>18,090</i>	<i>18,090</i>	<i>18,090</i>	<i>18,090</i>

SOI - CAP	2019	2030	2040	2045
Residential built environment	3,700	2,510	1,700	920
Commercial/ industrial built environment	1,480	1,160	880	590
On-road transportation	7,720	3,360	1,090	460
Off-road equipment	180	320	260	270
Rail	110	30	30	30
Solid waste generation	610	330	280	250
Landfill	0	0	0	0
Water and wastewater	50	50	40	40
Land use and sequestration	-270	-270	-270	-270
<b>Total</b>	<b>13,580</b>	<b>7,490</b>	<b>4,010</b>	<b>2,290</b>
<i>Point sources</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

# EXECUTIVE SUMMARY

adapted to ensure that they are appropriate for San Mateo and meet the CEQA requirements for community-wide plans as well as individual development projects. These targets are:

- 2030: Reduce emissions to 40 percent below 1990 levels (49 percent below baseline 2005 levels), equal to 339,880 MTCO<sub>2</sub>e.
- 2045: Reduce emissions to 85 percent below 1990 levels (87 percent below baseline 2005 levels), equal to 84,970 MTCO<sub>2</sub>e.

## Existing and Planned Accomplishments

The forecast represents a “worst case” scenario if no action is taken to reduce GHG emissions. However, San Mateo, along with regional and State agencies, have already taken actions to reduce GHG emissions below their 2019 limit and to close the gap to the City’s GHG reduction targets. The 2020 CAP identifies the GHG reductions from these existing and planned accomplishments. **Table ES-1** shows the reductions from these accomplishments and San Mateo’s projected future emissions affect taking these accomplishments into account.

**Table ES-1: Reductions from Existing and Planned Accomplishments**

	2030	2040	2045
Forecasted Emissions	605,420 MTCO <sub>2</sub> e	696,810 MTCO <sub>2</sub> e	750,400 MTCO <sub>2</sub> e
Reductions from State existing and planned accomplishments	-72,900 MTCO <sub>2</sub> e	-147,970 MTCO <sub>2</sub> e	-196,140 MTCO <sub>2</sub> e
Reductions from local and regional existing and planned accomplishments	-23,980 MTCO <sub>2</sub> e	-18,360 MTCO <sub>2</sub> e	-4,950 MTCO <sub>2</sub> e
Emissions with existing and planned accomplishments	508,380 MTCO <sub>2</sub> e	530,510 MTCO <sub>2</sub> e	549,320 MTCO <sub>2</sub> e

## Reduction Measures

The 2020 CAP builds on the GHG reduction measures in the 2015 CAP, as well as the existing and planned accomplishments, to provide an updated suite of GHG reduction measures that meet the City’s targets. These measures are informed by several sources, including discussions with City staff, feedback from public engagement efforts, and direction from the Sustainability and Infrastructure Commission. The 2020 CAP contains 29 GHG reduction measures, all of which also provide additional community benefits such as financial savings and improvements to public health. **Table ES-2** shows these measures and the GHG reductions they allow.



# EXECUTIVE SUMMARY

**Table ES-2: Reductions by Measure**

Measure	2030	2040	2045
BE 1: All-electric new construction	-21,070	-38,450	-47,250
BE 2: All-electric existing buildings	-102,210	-184,610	-221,260
RE 1: Peninsula Clean Energy	-160	-170	0
RE 2: Renewable energy systems for new and existing residences	-70	-160	0
RE 3: Renewable energy systems for new and existing nonresidential buildings	-60	-90	0
EE 1: Residential energy efficiency retrofits	-6,160	-7,020	-6,790
EE 2: Nonresidential energy efficiency retrofits	-3,800	-8,860	-13,380
EE 3: Residential tree planting	Less than -10	Less than -10	0
ME 1: Energy efficiency for new municipal buildings	Supportive (no measurable GHG reductions)		
ME 2: Energy efficiency at existing municipal buildings	-10	-30	-40
ME 3: All-electric municipal buildings	-130	-200	-270
CF 1: Electric vehicle charging infrastructure	-24,420	-49,390	-69,780
CF 2: Electric vehicle education and outreach	-4,910	-8,030	-12,360
CF 3: Clean city fleet	-130	-200	-270
CF 4: Clean fuel and vehicle emissions	-4,210	-16,920	-26,360
ST 1: Bicycle mode share	-80	-170	-180
ST 2: Pedestrian mode share	-110	-120	-130
ST 3: Micromobility and shared mobility	Supportive (no measurable GHG reductions)		
ST 4: Public transit service	-3,610	-5,660	-6,910
ST 5: Commuter programs	Less than -10	-70	-160
ST 6: Transportation Demand Management	-2,010	-7,950	-13,410
ST 7: Transit-oriented development	-10,200	-18,920	-23,700



# EXECUTIVE SUMMARY

Measure	2030	2040	2045
SW 1: Composting program	-1,030	-1,710	-1,850
SW 2: Expanded recycling service	-6,070	-7,730	-8,820
SW 3: Waste awareness and source reduction	-2,080	-4,050	-5,590
WW 1: Water efficiency retrofits for existing buildings	-170	-300	-360
WW 2: Water-efficient landscaping	Less than -10	-10	0
WW 3: Water efficiency in new construction	Less than -10	-10	-20
OR 1: Alternative fuel lawn and garden equipment	-3,660	-7,130	-9,890
<b>Total</b>	<b>-196,360</b>	<b>-367,960</b>	<b>-468,780</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

When the 2020 CAP is fully implemented, it is projected to reduce GHG emissions to meet or exceed San Mateo's reduction targets:

- Projected 2030 emissions with the CAP are 311,990 MTCO<sub>2</sub>e, below the reduction target of 339,880 MTCO<sub>2</sub>e.
- Projected 2045 emissions with the CAP are 80,550 MTCO<sub>2</sub>e, below the City's reduction target of 84,970 MTCO<sub>2</sub>e

# CHAPTER 2

use leakage refers to the unintentional release of methane from the final use of natural gas, such as from pipelines, storage facilities, and appliances.

## 2019 Inventory

The project team prepared a 2019 GHG inventory to provide the most up-to-date available measurement of how San Mateo's GHG emissions have changed over time, including since the 2015 CAP. This inventory uses the same methods as the updated prior inventories, ensuring that all four inventories in the 2020 CAP are consistent with each other.

## Inventory Results

The community-wide inventories in the 2020 CAP include the following sectors, consistent with guidance in the US Community Protocol:

- **On-road transportation:** on-road vehicle trips on local roads and State highways within the city limits.
- **Commercial/industrial built environment:** electricity and natural gas used in nonresidential settings (e.g., industrial, commercial), including direct access electricity.
- **Residential built environment:** electricity and natural gas used in residential settings.
- **Off-road equipment:** the use of portable equipment and vehicles that do not travel on roads (e.g., construction or lawn and garden equipment).
- **Solid waste generation:** material produced by the community that is deposited in landfills which decompose and produce methane.
- **Landfills:** emissions that occur in the inventory year as a result of waste-in-place at a landfill that is within the community boundary or operated by the City.
- **Rail:** emissions resulting from Caltrain trips generated by passengers at three stations: San Mateo, Hayward Park, and Hillsdale, as well as emissions from freight trains.
- **Water and wastewater:** energy used to treat and pump water used and wastewater created, along with emissions from the processing of wastewater.
- **Land use and sequestration:** emissions resulting from development of previously undeveloped land and sinks (negative emissions) from carbon sequestration of open space and urban trees.
- **Point sources:** stationary source emissions resulting from fossil fuel combustion within the county as reported by BAAQMD. These emissions are included as an informational item and are not counted as part of the City's total emissions based on guidance from BAAQMD as they are not under the jurisdiction of the City.

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

**Table 2** shows the number of residents in San Mateo for the inventory years.

**Table 2: San Mateo Population (2005 – 2019)**

Indicator	2005 Value	2010 Value	2015 Value	2017 Value	2019 Value	Percentage Change, 2005–2019	Source
Population	93,400	97,110	101,610	103,470	104,599	12%	CA Dept. of Finance, ABAG

In the baseline year of 2005, the GHG emissions from the covered activities totaled 666,410 MTCO<sub>2</sub>e, as shown in **Table 3** and **Figure 5**. The sector with the largest portion of emissions was on-road transportation, which produced 282,370 MTCO<sub>2</sub>e, or 42 percent of all community emissions. The next largest sector, commercial/industrial built environment, produced 169,000 MTCO<sub>2</sub>e, 25 percent of the total. The residential built environment was the third largest sector with 25 percent of total emissions (163,770 MTCO<sub>2</sub>e) followed by solid waste generation (22,180 or 3 percent), the off-road equipment (15,900 MTCO<sub>2</sub>e or 2 percent), and landfill (7,370 MTCO<sub>2</sub>e or 1 percent) sectors. Rail emissions totaled 4,350 MTCO<sub>2</sub>e (1 percent) and water and wastewater emissions totaled 2,520 MTCO<sub>2</sub>e (less than 1 percent of total emissions). Finally, land use and sequestration were responsible for a reduction in emissions of 1,050 MTCO<sub>2</sub>e, equivalent to removing 1 percent of total emissions.

**Table 3: San Mateo 2005 Community-Wide GHG Emissions**

Sector	MTCO <sub>2</sub> e (Absolute)	Percentage
On-road transportation	282,370	42%
Commercial/industrial built environment	169,000	25%
Residential built environment	163,770	25%
Solid waste generation	22,180	3%
Off-road equipment	15,900	2%
Landfill	7,370	1%
Rail	4,350	1%
Water and wastewater	2,520	0%
Land use and sequestration	-1,050	-1%
<b>Total</b>	<b>666,410</b>	<b>100%</b>
<b>Informational Items</b>		
Point sources	7,390	1%

*Note: Due to rounding, totals may not equal the sum of the component parts.*

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

**Table 4: San Mateo 2005-2019 Community-Wide Emissions (Absolute)**

Sector	2005 (MTCO <sub>2</sub> e)	2010 (MTCO <sub>2</sub> e)	2015 (MTCO <sub>2</sub> e)	2017 (MTCO <sub>2</sub> e)	2019 (MTCO <sub>2</sub> e)	Percentage Change, 2005 to 2019
On-road transportation	282,370	287,550	280,570	269,110	276,560	-2%
Commercial/industrial built environment	169,000	151,200	137,350	101,720	83,660	-50%
Residential built environment	163,770	165,800	131,660	118,980	114,630	-30%
Off-road equipment	15,900	17,840	14,960	14,940	14,400	-9%
Solid waste generation	22,180	16,580	15,860	17,890	21,910	-1%
Landfill	7,370	6,670	6,030	5,800	4,180	-43%
Rail	4,350	4,480	4,410	4,520	4,440	2%
Water and wastewater	2,520	2,380	2,220	1,810	1,670	-34%
Land use and sequestration	-1050	-1,050	-1,050	-1,040	-1040	-1%
<b>Total</b>	666,410	651,450	592,010	533,730	520,410	-22%
<b>Informational Item</b>						
Point sources	7,390	7,390	11,610	14,230	18,090	145%

*Note: Due to rounding, totals may not equal the sum of the component parts.*

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

**Table 5: San Mateo 2005 and 2019 Community Emissions (Per-Capita)**

	2005	2019
MTCO <sub>2</sub> e per-capita	7.14	4.98

## GREENHOUSE GAS EMISSIONS FORECAST

A forecast of future GHG emissions helps to ensure consistency with the guidelines for a Qualified GHG Reduction Strategy put forward by BAAQMD, as described in **Chapter 1**. A forecast allows elected officials, City staff, and community members to identify the amount of reductions necessary in order to achieve future GHG reduction targets and can help support long-range community planning efforts. The CAP update includes a forecast for the calendar years 2030, 2040, and 2045.

A GHG emissions forecast estimates how emissions would grow over time if no action is taken at the federal, State, or local level to reduce them. A set of indicators determines the extent of growth that could occur and how resulting emissions may change. An emissions forecast was prepared for San Mateo using the best available information regarding indicators and growth rates. The forecast relies on growth assumptions from the buildout projections in the Strive San Mateo General Plan 2040. Activity data rates in the forecast, such as household energy use, vehicle miles travelled, or per person waste disposal, are based on the 2019 emissions inventory.

**Table 6** presents data from 2019 and projections for the years 2030, 2040, and 2045.

**Table 6: San Mateo 2019, 2030, 2040, and 2045 Growth Indicators**

Indicator	2019 Value	2030 Value	2040 Value	2045 Value	Percentage Change, 2019–2045
Population	104,599	129,210	156,585	172,370	65%
Households	39,771	49,260	59,843	65,960	66%
Jobs	61,232	69,400	77,760	82,310	34%
Service population <sup>1</sup>	165,831	198,610	234,345	254,680	54%

<sup>1</sup> Service population is the sum of the residential population and the number of jobs.

## CHAPTER 2

Each indicator is used to project future emissions for the following sectors:

- Population: off-road equipment (lawn and garden equipment, pleasure crafts, portable equipment, and recreational equipment).
- Households: Residential built environment.
- Jobs: Commercial/industrial built environment, off-road equipment (industrial equipment and light commercial equipment).
- Service population: On-road transportation, rail (Caltrain), off-road equipment (construction and mining equipment, transportation refrigeration units), solid waste generation, water and wastewater.

Emissions from direct access electricity, point sources, and freight trains are held constant, and are not projected to change over time. Construction and mining emissions, part of the off-road equipment sector, are forecasted by the change in service population. Landfill emissions are based on decomposition rates provided by CARB and are not forecasted by an indicator. Land use and sequestration emissions are based on the acreage of forested land, developed land, and urban areas, as projected by the Strive San Mateo General Plan 2040.

The project team applied these indicators to forecast future GHG emissions. Relative to 2019 emissions, San Mateo's GHG emissions are expected to rise by more than 44 percent by 2045 if no action is taken. The forecast assumes that each person in San Mateo will continue to contribute the same amount of GHGs to the community's total, so that the amount of GHGs increase as the demographics of the community change. **Tables 7 and 8** show San Mateo's forecasted community-wide GHG emissions

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

**Table 7: San Mateo Community-Wide BAU GHG Emissions Sector Totals (Absolute)**

Sector	2019 (MTCO <sub>2</sub> e)	2030 (MTCO <sub>2</sub> e)	2040 (MTCO <sub>2</sub> e)	2045 (MTCO <sub>2</sub> e)	Percentage Change, 2019–2045
On-road transportation	276,560	308,930	351,730	375,310	36%
Commercial/industrial built environment	83,660	93,710	104,010	109,610	31%
Residential built environment	114,630	141,960	172,460	190,110	66%
Off-road equipment	14,400	23,770	26,620	30,360	111%
Solid waste generation	21,910	26,240	30,960	33,650	54%
Landfill	4,180	4,470	3,660	3,310	-21%
Rail	4,440	5,220	6,080	6,560	48%
Water and wastewater	1,670	1,990	2,340	2,540	53%
Land use and sequestration	-1,040	-1,050	-1,050	-1,050	0%
<b>Total</b>	<b>520,400</b>	<b>605,240</b>	<b>696,810</b>	<b>750,400</b>	<b>44%</b>
Percentage Change from 2005	-22%	-9%	5%	13%	
<b>Informational Item</b>					
Point sources	18,090	18,090	18,090	18,090	0%

*Note: Due to rounding, totals may not equal the sum of the component parts.*



# CHAPTER 2

## GHG EMISSIONS REDUCTION TARGETS

The California Environmental Quality Act (CEQA) Guidelines Section 15183.5(b) requires that a Qualified GHG Reduction Strategy contain a goal for substantive GHG reductions, although the guidelines do not set a specific level for what these goals should be. In the Climate Change Scoping Plan (Scoping Plan), the State provides its statewide GHG reduction targets and guidance for local communities. The CAP uses 2005 as a baseline year for measuring progress towards emission targets. In the 2015 CAP, the City adopted a GHG reduction target of 15 percent below the baseline 2005 GHG emission levels by 2020. The City chose this reduction target to remain consistent with the state-recommended target at the time, which was a reduction of 15 percent below existing levels by 2020, which is the local equivalent of the state's own adopted reduction target of reducing emissions to 1990 levels. Although "existing emission levels" was not formally defined by the Scoping Plan, agencies throughout California have often interpreted it as referring to emissions occurring between 2005 and 2008. San Mateo's GHG reduction strategies have used 2005 emissions as the "existing" levels and the State targets to inform the 2030 and 2045 targets listed below.

These statewide targets are:

- 2030: Reduce emissions 40 percent below 1990 levels, codified into law by SB 32 (2016)
- 2045: Reduce emissions 85 percent below 1990 levels and achieve carbon neutrality, codified into law by AB 1279 (2022).

Based on the results of the quantification process to identify the GHG reduction potential from the 2020 CAP (see Chapter 3), the City determined that the statewide targets for 2030 and 2045 were appropriate for San Mateo. To ensure that the CAP can continue to serve as a Qualified GHG Reduction Strategy, San Mateo has set its 2030 and 2045 targets to align with the State's targets. In the quantification of the CAP measures, 2040 is used as an interim benchmark as it aligns with the horizon of Strive San Mateo General Plan 2040 and tracks progress towards the 2045 target. These targets are meant to serve as ceilings for future GHG emissions. As discussed in the following chapter, the City has the potential to achieve greater GHG reductions, decreasing emissions below these levels.

Previous versions of the Scoping Plan have recommended per-capita targets for community-wide plans, such as a CAP. The 2020 CAP used per-capita targets as recommended by the most recently adopted version of the Scoping Plan at the time it was written. With the adoption of AB 1279 and the 2022 Scoping Plan, State guidance recommends that local governments use "absolute" GHG reduction targets consistent with statewide GHG reduction goals. This version of the CAP uses absolute GHG reduction targets.

# GREENHOUSE GAS INVENTORIES, FORECASTS, AND REDUCTION TARGETS

## Qualified GHG Reduction Strategies

These revised targets help ensure that the 2020 CAP will continue to serve as San Mateo's Qualified GHG Reduction Strategy, which allows developments that are consistent with the CAP to streamline their environmental review. As noted in Chapter 1, the requirements for a Qualified GHG Reduction Strategy are:

- Quantify emissions, both existing and projected over a time period, from activities in a defined area.
- Establish a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of persons that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specific levels.
- Adopt the GHG reduction strategy in a public process following environmental review.



## Chapter 3

# Strategies to Achieve the Targets

To understand the level of action necessary to achieve the City's reduction targets this updated CAP analyzes existing, planned, and future actions. By first looking at these accomplishments, the City can understand progress achieved and outstanding opportunities. Existing and current efforts provide a foundation for this CAP. New measures can further close the gap and guide future programs. Together, these efforts serve as the City's multipronged strategy to achieve reduction targets.

**Table 8** shows the GHG emission levels that are expected to result when this CAP is fully implemented, based on the results of the analyses in this chapter, along with the GHG reduction targets.

**Table 8: San Mateo Emissions with 2020 CAP Implementation (2030 – 2045)**

	2030	2045
Projected Emission level	311,990 MTCO <sub>2</sub> e	80,550 MTCO <sub>2</sub> e
Target	339,880 MTCO <sub>2</sub> e	84,970 MTCO <sub>2</sub> e
Target achieved?	Yes	Yes
Gap to target	-27,890 MTCO <sub>2</sub> e	-4,420 MTCO <sub>2</sub> e

The CAP achieves these reductions by accounting for the GHG reductions from existing and planned State, regional, and local activities, along with the reduction measures in the CAP itself. **Table 9** shows the reduction levels achieved by the individual measures in the CAP. More details about the measures and all other reductions are given below.



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**Table 9: Reductions from CAP Measures (2030 – 2045)**

Measure	2030	2040	2045
BE 1: All-electric new construction	-21,070	-38,450	-47,250
BE 2: All-electric existing buildings	-102,210	-184,610	-221,260
RE 1: Peninsula Clean Energy	-160	-170	0
RE 2: Renewable energy systems for new and existing residences	-70	-160	0
RE 3: Renewable energy systems for new and existing nonresidential buildings	-60	-90	0
EE 1: Residential energy efficiency retrofits	-6,160	-7,020	-6,790
EE 2: Nonresidential energy efficiency retrofits	-3,800	-8,860	-13,380
EE 3: Residential tree planting	Less than -10	Less than -10	Less than -10
ME 1: Energy efficiency for new municipal buildings	Supportive (no measurable GHG reductions)		
ME 2: Energy efficiency at existing municipal buildings	-10	-30	-40
ME 3: All-electric municipal buildings	-130	-200	-270
CF 1: Electric vehicle charging infrastructure	-24,420	-49,390	-69,780
CF 2: Electric vehicle education and outreach	-4,910	-8,030	-12,360
CF 3: Clean city fleet	-130	-200	-270
CF 4: Clean fuel and vehicle emissions	-4,210	-16,920	-26,360
ST 1: Bicycle mode share	-80	-170	-180
ST 2: Pedestrian mode share	-110	-120	-130
ST 3: Micromobility and shared mobility	Supportive (no measurable GHG reductions)		
ST 4: Public transit service	-3,610	-5,660	-6,910
ST 5: Commuter programs	Less than -10	-70	-160
ST 6: Transportation Demand Management	-2,010	-7,950	-13,410
ST 7: Transit-oriented development	-10,200	-18,920	-23,700
SW 1: Composting program	-1,030	-1,710	-1,850

# STRATEGIES TO ACHIEVE THE TARGET

Measure	2030	2040	2045
SW 2: Expanded recycling service	-6,070	-7,730	-8,820
SW 3: Waste awareness and source reduction	-2,080	-4,050	-5,590
WW 1: Water efficiency retrofits for existing buildings	-170	-300	-360
WW 2: Water-efficient landscaping	Less than -10	-10	0
WW 3: Water efficiency in new construction	Less than -10	-10	-20
OR 1: Alternative fuel lawn and garden equipment	-3,660	-7,130	-9,890
<b>Total</b>	<b>-196,360</b>	<b>-367,960</b>	<b>-468,780</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

## Existing and Planned Accomplishments

Both State and local efforts have achieved additional progress toward the reduction target, reducing the outstanding gap of emissions to achieve the City's reduction targets described in the previous chapter.

As mentioned in Chapter 2, the GHG emissions forecast is based on the results of the 2019 inventory and assumes that per-capita activity remains constant, so that changes in projected emissions are based on expected changes in San Mateo's demographics. This approach means that any action taken through 2019 to reduce GHG emissions is already taken into consideration for the forecast. For example, if homes installed solar energy systems in 2018, the effect of that action (lower residential electricity use) will already show up in the 2019 inventory, and by extension will be carried through into the forecast.

### State Existing and Planned Accomplishments

Since passing AB 32, the State has enacted regulations and programs to reduce GHG emissions. Although statewide in scope, these actions affect several sources of San Mateo's emissions, and so the local benefits of these State efforts can be "credited" to San Mateo even in cases where the community has not needed to take any action. This CAP includes the local benefits from five State policies:

- Renewables Portfolio Standard:** The Renewables Portfolio Standard (RPS) was first established in 2002 and has been amended multiple times, most recently by SB 100 in 2018. It requires all electricity providers in the State to obtain at least 33% of their electricity from eligible renewable resources by the end of 2020, 60% of their electricity from eligible renewable resources by the end of 2030, and all of their electricity from carbon-free (although not necessarily eligible renewable) resources by the end of 2045.

# STRATEGIES TO ACHIEVE THE TARGET

**Table 10: San Mateo Community-Wide GHG Emissions Reductions from State Programs**

Policy	2030 Emissions (MTCO <sub>2</sub> e)	2040 Emissions (MTCO <sub>2</sub> e)	2045 Emissions (MTCO <sub>2</sub> e)
Forecasted emissions	605,240	696,810	750,400
Clean Car Standards	-55,030	-95,730	-109,680
Renewables Portfolio Standard	-4,720	-15,330	-39,860
Title 24	-9,380	-32,480	-41,790
SB 1383	-3,760	-4,430	-4,820
Total reductions from existing State programs	-72,890	-147,970	-196,150
<b>Emissions with existing State programs</b>	<b>532,340</b>	<b>548,840</b>	<b>554,260</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

There are other programs that reduce GHG emissions that State agencies have adopted or are planning to put into effect. These are not included in this section because of uncertainty about how these programs will be applied. In many cases, State programs may be implemented by local actions, and reductions associated with these programs are included in the local reduction measures discussed later in this chapter.

## Existing and Planned Local and Regional Accomplishments

The City of San Mateo has a successful history of developing and implementing sustainability policies. The City's adopted plans, along with leadership from community members and businesses have been partially responsible for the decline in GHG emissions since 2005. Several policies are currently in place that are expected to further reduce San Mateo's GHG emissions. Some of these accomplishments were established before the City adopted its first CAP in 2015, while others were implemented in response to the 2015 CAP.

# STRATEGIES TO ACHIEVE THE TARGET

Collectively, San Mateo's existing and planned local and regional accomplishments are expected to reduce emissions by 23,990 MTCO<sub>2</sub>e in 2030, 18,360 MTCO<sub>2</sub>e in 2040, and 4,950 MTCO<sub>2</sub>e in 2045, in addition to the reductions achieved by State accomplishments. **Table 11** shows the reductions from each local and regional accomplishment.

**Table 11: Emissions Reductions from Local and Regional Programs**

Policy	2030 GHG Emissions (MTCO <sub>2</sub> e)	2040 GHG Emissions (MTCO <sub>2</sub> e)	2045 GHG Emissions (MTCO <sub>2</sub> e)
<b>Emissions with Existing State Programs</b>	<b>532,340</b>	<b>548,840</b>	<b>554,260</b>
Peninsula Clean Energy	-20,000	-13,750	0
Energy efficiency retrofits	-30	-30	-30
Solar energy installations	-20	-10	0
Municipal energy retrofits	-160	-160	-160
Public access EV chargers	0	0	0
Transportation Demand Management	-220	-200	-190
Caltrain electrification (planned)	-3,560	-4,200	-4,560
Total reductions from existing and planned local and regional programs	-23,990	-18,330	-4,940
<b>Emissions with existing and planned local and regional programs</b>	<b>508,380</b>	<b>530,510</b>	<b>549,320</b>

*Note: Due to rounding, totals may not equal the sum of the component parts.*

Existing and planned local, regional, and State accomplishments reduce San Mateo's forecasted GHG emissions by a significant amount. **Table 12** shows the benefit of these accomplishments relative to San Mateo's baseline.

**Table 12: Emissions with Existing and Planned Efforts**

Policy	2030	2040	2045
2005 (baseline) emissions (MTCO <sub>2</sub> e)	666,430	666,430	666,430
Emissions with existing and planned programs (MTCO <sub>2</sub> e)	508,380	530,510	549,320
Percent below baseline emissions	-24%	-20%	-18%





## Appendix 1:

# Technical Appendix: Methods and Assumptions

### GHG REDUCTION MEASURE QUANTIFICATION

This appendix summarizes data sources, assumptions, and performance metrics used to calculate greenhouse gas emissions reductions for the City of San Mateo Climate Action Plan. The sources and metrics are organized by measure and rely on four primary types of data and research: (1) San Mateo's GHG emissions inventory and forecast, (2) government agency tools and reports, (3) case studies in similar jurisdictions, and (4) scholarly research.

Further, the quantification approaches are consistent with guidance provided by the Bay Area Air Quality Management District (BAAQMD) for development of a Qualified GHG Reduction Strategy. The baseline GHG inventory and forecast serve as the foundation for the quantification of the City's GHG reduction measures. Activity data from the inventory form the basis of measure quantification, including vehicle miles traveled (VMT), kilowatt-hours (kWh) of electricity or therms of natural gas consumed, and tons of waste disposed. Activity data were combined with the performance targets and indicators identified by the City and consultants. The activity data and performance targets and indicators were used throughout the quantification process to calculate the



# APPENDIX 1

emissions reduction benefit of each measure. This approach ensures that San Mateo's GHG emissions reductions are tied to the baseline and to future activities occurring within the City.

## Emissions Factors

**Table 1-1** lists the emissions factors used to quantify emissions reductions in the CAP. These emission factors reflect the GHG reductions from existing and planned accomplishments, as well as PCE, to the extent feasible. They do not reflect the average emission factors with full implementation of this CAP.

**Table 1-1: Emissions Coefficients for CAP Measures**

Source	2005	2019	2030	2040	2045	Source
MTCO <sub>2</sub> e per mile driven (with Pavley)	0.000464	0.000392	0.000312	0.000277	0.000269	EMFAC 2021
MTCO <sub>2</sub> e per Caltrain passenger mile	0.004371	0.002506	0.000629	0.000627	0.000626	Caltrain, US Community Protocol
MTCO <sub>2</sub> e per kWh (PCE)	-	0.000045	0.000000	0.000000	0.000000	PCE, US EPA
MTCO <sub>2</sub> e per kWh (PG&E)	0.000223	0.000002	0.000002	0.000001	0.000000	PG&E, US EPA
MTCO <sub>2</sub> e per kWh (direct access)	0.000057	0.000212	0.000152	0.000095	0.000000	CEC, US EPA
MTCO <sub>2</sub> e per kWh (weighted community average)	0.000160	0.000054	0.000010	0.000006	0.000000	PCE, PG&E, CEC, US EPA
MTCO <sub>2</sub> e per therm	0.005292	0.005319	0.005319	0.005319	0.005319	US Community Protocol
MTCO <sub>2</sub> e per ton of waste	0.207521	0.253266	0.236134	0.236134	0.236134	CARB Landfill Emissions Tool v1.3

These emissions coefficients were calculated as follows, using data from the GHG inventory and forecast:

- **MTCO<sub>2</sub>e per mile driven:** Divide the emissions from on-road transportation by the number of on-road vehicle miles traveled.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

- **MTCO<sub>2</sub>e per passenger mile:** For Caltrain, divide the emissions from Caltrain activities related to San Mateo by the number of passenger miles attributed to San Mateo.
- **MTCO<sub>2</sub>e per kWh:** Divide the sum of the emissions for residential and commercial electricity use by the sum of the kWh for these two sources, for each electricity provider.
- **MTCO<sub>2</sub>e per therm:** Divide the sum of the emissions from residential and commercial natural gas by the sum of the therms used by these two sources.
- **MTCO<sub>2</sub>e per ton of waste:** Divide the sum of the emissions from landfilled waste and waste in place by the sum of the tons of waste in these sources.

## TECHNICAL DATA FOR EXISTING AND PLANNED LOCAL AND REGIONAL ACTIVITIES

Data sources, methods, and assumptions for the quantification of the existing and planned local and regional activities are provided below. Note that some existing and planned local activities may not have assumptions and/or performance metrics. The GHG reductions shown for existing and planned local and regional activities are only in addition to any reductions achieved by existing or planned State efforts.

### Peninsula Clean Energy

#### GHG Reduction

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	20,000	13,750	0

#### Performance Indicators

	2030	2040	2045
Electricity supplied by PCE (kWh)	495,153,490	487,569,650	501,096,050
PCE electricity supplied to ECO100 customers (kWh)	27,614,500	27,614,500	27,614,500

#### GHG Method

For overall electricity supplied by PCE, the project team identified the current fraction of community electricity supplied by PCE and applied this ratio to future projections of electricity use. The team subtracted the amount of PCE-supplied electricity in 2020 from this future projection to obtain the increase in PCE electricity supplies,

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then multiplied this value by an emissions factor that reflects PCE's future energy procurement plans. For ECO100, the project team identified how much electricity is served to ECO100 and applied an emissions factor that reflects the community's weighted average of electricity sources to determine the overall amount of averted emissions.

## GHG Sources

California Energy Commission. 2023. *2019 Power Content Label: Peninsula Clean Energy*.  
<https://www.energy.ca.gov/filebrowser/download/3244>.

Dobrovskaya, M. 2023. Peninsula Clean Energy. Personal communication to A. Chow, City of San Mateo. April 19.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Energy-efficiency retrofits

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	136,470	136,470	136,470
Natural gas savings (therms)	5,910	5,910	5,910
Emissions reduction (MTCO <sub>2</sub> e)	30	30	30

### GHG Method

The project team collected data on the savings from energy efficiency retrofits, as reported by the San Mateo County Energy Watch and BayREN. The team then multiplied these values by the appropriate emissions factor in order to calculate GHG reductions.

### GHG Sources

City of San Mateo. 2021. *Climate Action Plan Progress Report*.  
<https://sanmateo.primegov.com/Portal/viewer?id=4766&type=2>

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## Solar energy installation

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	5,695,620	5,695,620	5,695,620
Emissions reduction (MTCO <sub>2</sub> e)	20	10	0

### GHG Method

The project team obtained data on the number and generation potential of new solar energy installations in San Mateo. The team then used a National Renewables Energy Laboratory tool to determine how much electricity can be produced in San Mateo, on average, per kilowatt of generation potential, and calculated the total electricity generated annually from these installations. The project team applied a weighted average community electricity emissions factor to this total to determine GHG reductions.

### GHG Sources

California Solar Initiative. 2023. "California Distributed Generation Statistics." <https://www.californiadgstats.ca.gov/downloads/>

City of San Mateo. 2022. *Climate Action Plan Progress Report*. <https://sanmateo.primegov.com/Portal/viewer?id=6472&type=2>

National Renewable Energy Laboratory. n.d. "PVWatts Calculator." <https://pvwatts.nrel.gov/>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Municipal energy-efficiency retrofits

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	1,831,170	1,831,170	1,831,170
Natural gas savings (therms)	22,870	22,870	22,870
Emissions reduction (MTCO <sub>2</sub> e)	160	160	160

### GHG Method

The project team reviewed the results of the energy efficiency analysis provided by PG&E, which identifies anticipated electricity and natural gas savings from implementing the SST retrofits. The team applied the appropriate electricity and natural gas emissions factor to determine the overall GHG reduction.

### GHG Sources

City of San Mateo. 2021. *Climate Action Plan Progress Report*.  
<https://sanmateo.primegov.com/Portal/viewer?id=4766&type=2>



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## Public-access EV chargers

### GHG Reduction

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	Less than 10	Less than 10

### Performance Indicators

	2030	2040	2045
Net increase in EV VMT	258,720	258,720	258,720
Net increase in electricity use (kWh)	87,960	87,960	87,960

### GHG Method

The project team collected information on the number of public EV chargers in San Mateo and used factors about the average charging use of public EV chargers to estimate how many VMT of EV use the public chargers in the community support annually. The project team then estimated the electricity use from these EV chargers. Next, the team applied the appropriate emissions factors to the VMT and electricity use figures and took the difference between the two as the net reduction in GHG emissions.

### GHG Sources

Chow, A. 2023. City of San Mateo. Personal communication to E. Krispi, PlaceWorks. April 14.

ICLEI – Local Governments for Sustainability. n.d. Climate and Air Pollution Planning Assistant v 1.5.

US Environmental Protection Agency. n.d. "Interactive Version of the Electric Vehicle Label." <https://www.epa.gov/fueleconomy/interactive-version-electric-vehicle-label>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Transportation Demand Management

### Activity and GHG Reduction

	2030	2040	2045
Transportation savings (VMT)	725,620	700,370	687,710
Emissions reduction (MTCO <sub>2</sub> e)	190	170	160

### GHG Method

The project team obtained information from the San Mateo Rail Corridor Area Transportation Management Agency to identify the mandatory reductions in trip generation as a result of existing and under-construction developments subject to TDM provisions and combined this information with results from the inventory and forecast to estimate the decrease in VMT resulting from TDM. The project team applied the community-wide VMT emissions coefficient to this figure to determine the GHG reductions.

### GHG Sources

Lim, L. 2019. City of San Mateo. Personal communication to A. Chow, City of San Mateo. January 3.

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## Additional Bicycle Lanes

### Activity and GHG Reduction

	2030	2040	2045
VMT savings	97,990	111,570	119,050
Emissions reduction (MTCO <sub>2</sub> e)	30	30	30

### Performance Indicators

	2030	2040	2045
Additional bicycle lanes (miles)	6.4	6.4	6.4

### GHG Method

The project team reviewed the Bicycle Master Plan showing the increase in bicycle lanes planned for 2020 along with the number of bicycle lanes that have been constructed since the 2019 inventory. The team used this information and the proposed methodology from the California Air Pollution Control Officers Association to calculate the percentage increase in VMT associated with an increase in bicycle lanes and applied the VMT emissions factor for personal vehicles to determine the GHG reductions associated with this existing accomplishment.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

Chow, A. 2023. City of San Mateo. Personal communication to E. Krispi, PlaceWorks. April 14

U.S. Census Bureau. 2023. 2014 – 2019 American Community Survey 5-Year Estimates, B08006: Sex of Workers by Means of Transportation to Work [data table].

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Caltrain electrification

### Activity and GHG Reduction

	2030	2040	2045
Electricity use increase (kWh)	11,852,700	11,852,700	11,852,700
Emissions reduction (MTCO <sub>2</sub> e)	3,560	4,200	4,560

### GHG Method

The project team reviewed information from the Caltrain electrification project EIR to estimate decreases in diesel use and increases in electricity use from electrification. The team combined these data with information from the inventory to scale these changes in activity data specifically to San Mateo. The team applied the Caltrain emissions factors from the inventory to determine net GHG reductions from electrification.

### GHG Sources

Peninsula Corridor Joint Powers Board. 2014. *Peninsula Corridor Electrification Project Draft Environmental Impact Report*.

[http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization/PeninsulaCorridorElectrificationProject/PCEP\\_DEIR\\_2014.html](http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization/PeninsulaCorridorElectrificationProject/PCEP_DEIR_2014.html).

# APPENDIX 1

## TECHNICAL DATA FOR QUANTIFIED MEASURES

Data sources, methods, and assumptions for the quantification of CAP measures are provided below.

### BE 1 All-electric new construction

#### Assumptions

	2030	2040	2045
Cumulative % of residential construction influenced by energy efficiency reach code:	90%	95%	95%
Cumulative % of office commercial construction influenced by energy efficiency reach code:	85%	90%	95%
Cumulative % of non-office commercial construction influenced by energy efficiency reach code:	40%	60%	90%
Cumulative % new non-residential buildings that are office space:	59%	64%	64%

#### Activity and GHG reductions

	2030	2040	2045
Electricity savings (kWh)	-8,588,290	-15,674,440	-19,303,790
Natural gas savings (therms)	3,099,740	5,653,260	6,936,870
Emissions reduction (MTCO <sub>2</sub> e)	21,070	38,450	47,250

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Performance indicators

	2030	2040	2045
Number of all-electric new construction residential housing units	8,280 new construction residential housing units built all-electric.	19,360 new construction residential housing units built all-electric.	25,500 new construction residential housing units built all-electric.
Square feet of all-electric new construction non-residential buildings	837,280 square feet of new construction non-residential buildings built all-electric.	2,264,130 square feet of new construction non-residential buildings built all-electric.	3,424,010 square feet of new construction non-residential buildings built all-electric.

## GHG Method

The project team obtained data from Strive San Mateo General Plan 2040 Land Use Element on projected buildout of nonresidential buildings in San Mateo and data from Association of Bay Area Governments (ABAG) Plan Bay Area on projected buildout of households in San Mateo out to 2045, and used these data to estimate the number of new buildings that would be impacted by an all-electric new construction reach code. The team identified the average amount of natural gas used per household are per nonresidential square foot and data on the equivalent amount of electricity that would be required in an all-electric version of similar buildings, and applied this information to the projected number of new buildings built in order to estimate the projected reduction in natural gas consumption and the projected increase in electricity consumption resulting from the policy. The team then applied the emission factor for avoided natural gas consumption to estimate the emissions reduction associated with reduced natural gas consumption, and the emission factor for electricity use to estimate the emissions increase associated with increased electricity consumption. The net resulting emissions is the estimated emissions avoided from the policy.

## GHG Sources

California Energy Commission. 2006. "California Commercial End-Use Survey."  
[https://ww2.energy.ca.gov/ceus/2006\\_enduse.html](https://ww2.energy.ca.gov/ceus/2006_enduse.html)

California Energy Commission. 2009. "2009 California Residential Appliance Saturation Study."  
[https://ww2.energy.ca.gov/appliances/rass/previous\\_rass.html](https://ww2.energy.ca.gov/appliances/rass/previous_rass.html)

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## BE 2 All-electric existing buildings

### Assumptions

	2030	2040	2045
Cumulative percent of commercial buildings that are office space	59%	64%	64%
Cumulative percent of residential gas equipment reaching end of life replaced with electric due to panel incentive	35%	40%	50%
Cumulative percent of residential electrical panel upgrades resulting in EV purchase	50%	35%	20%
Cumulative percent of office gas equipment reaching end of life replaced with electric due to panel incentive	70%	75%	90%
Cumulative percent of office electrical panel upgrades resulting in EV charging installation	40%	30%	20%
Cumulative percent of EV purchases replacing gasoline vehicle	98%	97%	96%
Cumulative percent of EV purchases replacing diesel vehicle	3%	3%	4%

### Activity and GHG reductions

	2030	2040	2045
Electricity savings (kWh)	-80,105,780	-125,747,100	-133,624,540
Natural gas savings (therms)	5,002,490	11,459,340	17,775,000
Emissions reduction (MTCO <sub>2</sub> e)	102,210	184,610	221,260



# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Performance indicators

	2030	2040	2045
Existing residential gas to electric HVAC conversions	9,890 existing residential gas HVAC systems replaced with electric HVAC systems.	22,620 existing residential gas HVAC systems replaced with electric HVAC systems.	35,340 existing residential gas HVAC systems replaced with electric HVAC systems.
Existing residential gas to electric water heating conversions	14,840 existing residential gas water heaters replaced with electric HVAC systems.	33,920 existing residential gas water heaters replaced with electric HVAC systems.	53,000 existing residential gas water heaters replaced with electric HVAC systems.
Existing residential gas to electric clothes drying conversions	7,420 existing residential gas clothes dryers replaced with electric clothes dryers.	16,960 existing residential gas clothes dryers replaced with electric clothes dryers.	26,500 existing residential gas clothes dryers replaced with electric clothes dryers.
Existing residential gas to electric cooking conversions	5,940 existing residential gas ranges and ovens replaced with electric ranges and ovens.	13,570 existing residential gas ranges and ovens replaced with electric ranges and ovens.	21,200 existing residential gas ranges and ovens replaced with electric ranges and ovens.
Existing residential electrical panel upgrades	19,050 existing residential electrical panels upgraded.	43,530 existing residential electrical panels upgraded.	68,020 existing residential electrical panels upgraded.
Square feet of existing offices receiving gas to electric HVAC conversions	5,523,120 square feet of existing office buildings replace existing gas HVAC systems with electric HVAC systems.	12,778,100 square feet of existing office buildings replace existing gas HVAC systems with electric HVAC systems.	19,167,150 square feet of existing office buildings replace existing gas HVAC systems with electric HVAC systems.
Square feet of existing offices receiving gas to electric water heating conversions	8,284,680 square feet of existing office buildings replace existing gas water heaters with electric water heaters.	19,167,150 square feet of existing office buildings replace existing gas water heaters with electric water heaters.	28,750,730 square feet of existing office buildings replace existing gas water heaters with electric water heaters.

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	2030	2040	2045
Square feet of existing offices receiving gas to electric cooking conversions	6,627,740 square feet of existing office buildings replace existing gas ranges and ovens with electric ranges and ovens.	15,333,720 square feet of existing office buildings replace existing gas ranges and ovens with electric ranges and ovens.	23,000,580 square feet of existing office buildings replace existing gas ranges and ovens with electric ranges and ovens.
Square feet of existing offices receiving electrical panel upgrades	10,217,770 square feet of existing office buildings electrical panels upgraded.	23,639,490 square feet of existing office buildings electrical panels upgraded.	35,459,230 square feet of existing office buildings electrical panels upgraded.
Number of electric vehicles purchased/leased to replace internal combustion engine (ICE) vehicles	16,750 electric vehicles purchased or leased by residents or commuters to replace internal combustion engine vehicles.	27,780 electric vehicles purchased or leased by residents or commuters to replace internal combustion engine vehicles.	26,150 electric vehicles purchased or leased by residents or commuters to replace internal combustion engine vehicles.
Existing office parking spaces with EV charging:	8,170 EV charging ports installed at existing office buildings.	14,180 EV charging ports installed at existing office buildings.	14,180 EV charging ports installed at existing office buildings.
Existing residential parking spaces with EV charging:	9,520 EV charging ports installed at existing residential buildings.	15,240 EV charging ports installed at existing residential buildings.	13,600 EV charging ports installed at existing residential buildings.

## GHG Method

The project team used data from Strive San Mateo General Plan 2040 Land Use Element on projected buildout of residential and nonresidential buildings in San Mateo and data from Association of Bay Area Governments (ABAG) Plan Bay Area on projected buildout of households in San Mateo out to 2045 to estimate the number of existing buildings that would be impacted by a policy aimed at providing incentives to encourage residents and businesses to upgrade electric panels and adopt all-electric technologies. The team identified the percent of natural gas equipment (e.g., water heaters) that would be replaced at end of life if this policy existed, using the average life of natural gas equipment to estimate the number of each type of equipment type that would be replaced per year. Next, the project team consulted reports on the average amount of natural gas consumed by each type of equipment to estimate the natural gas consumption avoided through electrification of natural gas

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

equipment. The team used data on energy factors by equipment type to estimate the resulting increase in electricity use resulting from the replacement of natural gas equipment with electric equipment. The team also identified performance indicators for the percent of EV chargers that would be installed as a result of this policy and the resulting number of EVs that would be purchased due to accessibility of charging. The team used data on the average VMT by a passenger vehicle, average efficiency of gasoline vehicles, average efficiency of diesel vehicles, and average efficiency of electric vehicles to estimate the resulting gasoline and diesel consumption avoided and increase in electricity use resulting from the replacement of gasoline and diesel vehicles with electric vehicles. Last, the team applied the appropriate emission factors for natural gas consumption, electricity use, gasoline consumption, and diesel consumption to estimate the emissions reduction associated with a reduction in natural gas consumption, gasoline consumption, and diesel consumption and the increase in emissions associated with an increase in electricity consumption. The net resulting emissions is the estimated emissions avoided from the policy.

## GHG Sources

California Energy Commission. 2006. "California Commercial End-Use Survey." [https://www2.energy.ca.gov/ceus/2006\\_enduse.html](https://www2.energy.ca.gov/ceus/2006_enduse.html)

California Energy Commission. 2009. "2009 California Residential Appliance Saturation Study." [https://www2.energy.ca.gov/appliances/rass/previous\\_rass.html](https://www2.energy.ca.gov/appliances/rass/previous_rass.html)

RSMeans. 2019 RSMeans Online, 2019 [software package].

ASHRAE, 2017. "ASHRAE Technical FAQ". <https://www.ashrae.org/technical-resources/technical-faqs>.

US Department of Energy. 2019. [www.fueleconomy.gov](http://www.fueleconomy.gov). <https://www.fueleconomy.gov/>.

California Air Resources Board. 2022. "EMFAC2021 Web Database". <https://arb.ca.gov/emfac/>.

National Renewable Energy Laboratory. 2018. "CEC EV Infrastructure Projection Tool (EVI-Pro)." <https://afdc.energy.gov/evi-pro-lite>.

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## RE I Peninsula Clean Energy

### GHG Assumptions

	2030	2040	2045
Percent of residents enrolling in PCE	98%	99%	99.5%
Percent of businesses enrolling in PCE	98%	99%	99.5%
Percent of direct access customers switching to PCE	2%	4%	5%

### GHG Reductions

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	160	170	0

### Performance Indicators

	2030	2040	2045
PCE opt-out rate	1.0%	1.0%	0.5%
kWh supplied by ECO 100	32,959,210	43,792,410	55,425,750

### GHG Method

The project team identified the amount of electricity from San Mateo customers projected to switch from PG&E to PCE service, and PCE customers upgrading to ECO100. The team next applied the difference in PG&E and PCE emissions factors for both regular and ECO100 service to identify the decrease in GHG emissions.

### GHG Sources

California Energy Commission. 2018. *2017 Power Content Label: Peninsula Clean Energy*.  
[https://ww2.energy.ca.gov/pcl/labels/2017\\_labels/PCE\\_2017\\_PCL.pdf](https://ww2.energy.ca.gov/pcl/labels/2017_labels/PCE_2017_PCL.pdf).

City of San Mateo. 2020. *2020 Climate Action Plan Annual Progress Report*.  
<https://www.cityofsanmateo.org/3962/CAP-Progress-Updates>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## RE 2 Renewable energy systems for new and existing residences

### GHG Assumptions

	2030	2040	2045
Percent of existing homes installing solar energy systems	15%	25%	30%
Percent of existing homes with solar energy systems installing battery storage systems	20%	35%	50%
Percent of new homes installing battery storage systems	25%	40%	60%

### GHG Reduction

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	70	160	0

### Performance Indicators

	2030	2040	2045
Number of homes built before 2018 with solar panels	4,960	8,540	10,530
Number of total homes (existing and new) with battery energy systems	1,500	12,040	22,710

### GHG Method

For solar energy systems, the project team identified the number of existing homes in San Mateo that could be projected to have a solar energy system. Using data from the National Renewable Energy Laboratory, the team identified how much electricity these solar energy systems could generate annually and applied the community-wide electricity factor to identify electricity savings. For battery systems, the team identified the number of new and existing homes installing solar energy systems and determined the number of these homes that could install a battery energy system. Assuming that battery systems fully charge and discharge once a day, the team identified how much additional renewable energy storage capacity would be enabled by the batteries. The project team then again applied the community-wide electricity factor to identify electricity savings.

### GHG Sources

National Renewable Energy Laboratory. n.d. "PVWatts Calculator." <https://pvwatts.nrel.gov/>.

# APPENDIX 1

Regional Climate Action Planning Suite. 2019. RICAPS Menu of Measures version 4.1 [data table].

## RE 3 Renewable energy systems for new and existing nonresidential buildings

### GHG Assumptions

	2030	2040	2045
Percent of existing businesses installing solar energy systems	6%	10%	15%
Percent of existing businesses with solar energy systems installing battery storage systems	15%	25%	40%

### GHG reductions

	2030	2040	2045
Emissions reduction (MTCO <sub>2</sub> e)	60	90	0

### Performance indicators

	2030	2040	2045
Number of businesses built before 2018 with solar panels	180	340	550
Number of existing businesses with battery energy systems	40	100	240

### GHG Method

The project team identified the number of existing businesses in San Mateo that could be projected to have a solar energy system. Using data from the National Renewable Energy Laboratory, the team identified how much electricity these solar energy systems could generate annually and applied the community-wide electricity factor to identify electricity savings. Next, the team identified the number of existing businesses installing solar energy systems and determined the number of these businesses that could install a battery energy system. Assuming that battery systems fully charge and discharge once a day, the team identified how much additional renewable energy storage capacity would be enabled by the batteries. The project team then again applied the community-wide electricity factor to identify electricity savings.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## GHG Sources

National Renewable Energy Laboratory. n.d. "PVWatts Calculator." <https://pvwatts.nrel.gov/>.

Regional Climate Action Planning Suite. 2019. RICAPS Menu of Measures version 4.1 [data table].

## EE 1 Residential energy efficiency retrofits

### Assumptions

	2030	2040	2045
Percent of existing homes conducting standard retrofits (not including fuel-switched homes)	15%	18%	20%
Percent of existing homes retrofitting to current Title 24 standards (not including fuel-switched homes)	20%	25%	30%

### Activity and GHG reductions

	2030	2040	2045
Electricity savings (kWh)	9,137,050	7,303,020	6,039,130
Natural gas savings (therms)	903,660	1,030,250	996,860
Emissions reduction (MTCO <sub>2</sub> e)	6,160	7,020	6,790

### Performance indicators

	2030	2040	2045
Number of homes retrofitted	2,290 single-family homes and 1,840 multifamily homes undergoing standard retrofits, and 3,060 single-family homes and 2,450 multifamily homes being upgraded to current Title 24 standards	2,540 single-family homes and 2,040 multifamily homes undergoing standard retrofits, and 3,530 single-family homes and 2,830 multifamily homes being upgraded to current Title 24 standards	2,350 single-family homes and 1,890 multifamily homes undergoing standard retrofits, and 3,530 single-family homes and 2,830 multifamily homes being upgraded to current Title 24 standards



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## GHG Method

The project team looked at reports from retrofit programs throughout California to identify the typical electricity and natural gas savings from single-family and multi-family home retrofits and applied these savings to the energy use patterns of residences in San Mateo. The team next reviewed current and projected future Title 24 standards against the current energy performance of San Mateo homes and projections of future San Mateo Title 24 retrofits to determine the typical electricity and natural gas savings. The team then applied the appropriate emissions factors to the energy savings estimates to determine GHG reductions.

## GHG Sources

California Energy Commission. 2014. Impact Evaluation of the California Comprehensive Residential Retrofit Programs.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## EE 2 Nonresidential energy efficiency retrofits

### Assumptions

	2030	2040	2045
Percent of existing businesses conducting standard retrofits (not including fuel-switched businesses)	25%	35%	10%
Percent of existing businesses retrofitting to current Title 24 standards (not including fuel-switched businesses)	15%	40%	75%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	22,252,780	60,968,630	93,592,880
Natural gas savings (therms)	535,400	1,266,570	1,964,000
Emissions reduction (MTCO <sub>2</sub> e)	3,800	8,860	13,380

### Performance Indicators

	2030	2040	2045
Number of businesses retrofitted	590 businesses undergoing standard retrofits, and 360 businesses upgraded to current Title 24 standards.	740 businesses undergoing standard retrofits, and 840 businesses upgraded to current Title 24 standards.	170 businesses undergoing standard retrofits, and 1,300 businesses upgraded to current Title 24 standards.

### GHG Method

The project team looked at reports of the energy savings from different types of nonresidential energy efficiency retrofits to identify the typical electricity and natural gas savings from these activities and applied these savings to the energy use patterns of San Mateo businesses. The team next reviewed current and projected future Title 24 standards against the current energy performance of San Mateo businesses and projections of future San Mateo Title 24 retrofits to determine the typical electricity and natural gas savings. The team then applied the appropriate emissions factors to the energy savings estimates to determine GHG reductions.

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## GHG Sources

Pacific Northwest National Laboratory. 2011. Advanced Energy Retrofit Guides: Office Buildings. [https://www.pnnl.gov/main/publications/external/technical\\_reports/PNNL-20761.pdf](https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-20761.pdf).

Pacific Northwest National Laboratory. 2011. Advanced Energy Retrofit Guides: Retail Buildings. [https://www.pnnl.gov/main/publications/external/technical\\_reports/PNNL-20814.pdf](https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-20814.pdf).

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## EE 3 Residential tree planting

### Assumptions

	2030	2040	2045
Percent of households with shade trees	10%	25%	35%

### Activity and GHG reduction

	2030	2040	2045
Electricity savings (kWh)	793,560	1,889,740	2,837,540
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	Less than 10	0

### Performance Indicators

	2030	2040	2045
Number of households with shade trees	4,240	13,130	22,330

### GHG Method

The GHG inventory and reports from PG&E were used to identify per business energy use in San Mateo, while data from the Pacific Northwest National Laboratory, the California Energy Commission, and academic studies were used to determine reductions per home. These results were combined with participation rates to calculate total reductions in energy use from this measure. The outcome was then combined with emissions factors from the inventory to determine GHG reductions.

### GHG Sources

The project team reviewed studies about the typical electricity savings from reduced air conditioning demand associated with tree planting. The team then applied this information to projections of future participation and the energy use patterns in San Mateo to identify total electricity reduction. Next, the team converted this to GHG emission savings using the appropriate emissions factors.

# APPENDIX 1

## ME 1 Energy efficiency for new municipal buildings

### GHG Assumptions, Reductions, and Performance Indicators

This measure is supportive due to the lack of information about future municipal construction. There are no assumptions, activity or GHG reductions, or performance indicators for supportive measures.

### GHG Method

Supportive measures do not produce direct, measurable GHG reductions, so no calculations were made.

### GHG Sources

Supportive measures do not produce direct, measurable GHG reductions. There are no sources for GHG reduction calculations for supportive measures.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## ME 2 Energy efficiency at existing municipal buildings

### Assumptions

	2030	2040	2045
Percent of existing municipal square footage retrofitted	10%	25%	35%

*Note that these retrofits go beyond those included as part of the Sustainable Solutions Turnkey program, as those are already accounted for as a planned action.*

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	67,260	168,140	235,400
Natural gas savings (therms)	1,860	4,640	6,500
Emissions reduction (MTCO <sub>2</sub> e)	10	30	40

### Performance Indicators

	2030	2040	2045
Square footage of retrofitted municipal buildings	9,440	23,610	33,050

### GHG Method

The project team looked at the typical energy efficiency savings that can be achieved with retrofits to office buildings and applied this reduction to the projected amount of retrofitted City square footage to calculate the total electricity and natural gas savings. The team then used the appropriate emission factors to identify the GHG reductions from these retrofits.

### GHG Sources

City of San Mateo. 2007. *City of San Mateo Greenhouse Gas Emissions Inventory Report*. <https://www.cityofsanmateo.org/DocumentCenter/View/5262/APPENDIX-S-October24-2007?bidId=>

Pacific Northwest National Laboratory. 2011. *Advanced Energy Retrofit Guides: Office Buildings*. [https://www.pnnl.gov/main/publications/external/technical\\_reports/PNNL-20761.pdf](https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-20761.pdf).

# APPENDIX 1

## ME 3 All-electric municipal buildings

### Assumptions

	2030	2040	2045
Cumulative building area of existing municipal building/s electrified (square feet):	40,000	60,000	80,000
Cumulative number of police stations & fire stations electrified:	0	0	1
Cumulative building area of new municipal building/s electrified (square feet):	40,000	60,000	80,000

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	-157,380	-236,070	-314,760
Natural gas savings (therms)	19,760	29,640	39,520
Emissions reduction (MTCO <sub>2</sub> e)	130	200	270

### Performance Indicators

	2030	2040	2045
Square feet of existing municipal building/s electrified:	40,000 square feet of existing municipal buildings retrofitted to all-electric.	60,000 square feet of existing municipal buildings retrofitted to all-electric.	80,000 square feet of existing municipal buildings retrofitted to all-electric.
Number of police stations & fire stations electrified:	0 existing police stations or fire stations retrofitted to all-electric.	0 existing police stations or fire stations retrofitted to all-electric.	1 existing police stations or fire stations retrofitted to all-electric.
Square feet of new municipal building/s electrified:	40,000 square feet of new municipal buildings built all-electric.	60,000 square feet of new municipal buildings built all-electric.	80,000 square feet of new municipal buildings built all-electric.



# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## GHG Method

The project team took inputs from City staff to project the total square footage of new municipal construction that is built all-electric and existing municipal construction that is retrofitted to be all-electric. The team estimated annual gas use associated with the existing municipal buildings to be retrofitted and the newly constructed municipal buildings (assuming they were built with natural gas equipment), based on energy use intensity information from the California Energy Commission Commercial End-Use Survey. The team used this estimate on "business as usual" natural gas consumption for these buildings to calculate the natural gas consumption avoided from retrofitting to all-electric or building to all-electric. The team looked at data on the average amount of natural gas consumed by each type of equipment to estimate the natural gas consumption avoided through electrification of natural gas equipment and used data on energy factors by equipment type was used to estimate the resulting increase in electricity use resulting from the replacement of natural gas equipment with electric equipment. The team applied emission factors for natural gas consumption and electricity use to estimate the emissions reduction associated with a reduction in natural gas consumption and the increase in emissions associated with an increase in electricity use and took the net resulting emissions as the estimated emissions avoided from the policy.

## GHG Sources

California Energy Commission. 2009. "2009 California Residential Appliance Saturation Study." [https://www2.energy.ca.gov/appliances/rass/previous\\_rass.html](https://www2.energy.ca.gov/appliances/rass/previous_rass.html)

# APPENDIX 1

## CF 1 Electric vehicle charging infrastructure

### Assumptions

	2030	2040	2045
Cumulative average square feet of new commercial building space per parking spot	300	300	300
Target percent of new workplace parking to have EV charger installed	20%	20%	25%
Target percent of new multi-unit dwelling residents with EV charger access	15%	25%	30%
Target percent of new single-family homes to have EV charger outlet installed	15%	25%	35%
Cumulative percent commercial buildings that are office space with parking	59%	64%	64%
Cumulative average square feet of existing commercial building space per parking spot	600	600	600
Target percent of existing workplace parking to have EV charger installed	7%	8%	10%
Target percent of existing multi-unit dwelling residents with access to EV charging	7%	8%	10%
Cumulative target additional public parking spaces with EV charging	38	55	60
Cumulative percent of EV purchases that replace a gasoline vehicle	98%	97%	96%
Cumulative percent of EV purchases that replace a diesel vehicle	2%	3%	4%
Target percent of heavy-duty vehicle converted to EV	5%	20%	25%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	-22,561,870	-36,502,430	-51,974,960
Emissions reduction (MTCO <sub>2</sub> e)	24,420	49,390	69,780

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## Performance Indicators

	2030	2040	2045
New non-residential parking spaces with EV charging	1,570 EV charging ports installed at new non-residential buildings.	3,160 EV charging ports installed at new non-residential buildings.	5,010 EV charging ports installed at new non-residential buildings.
New multi-unit dwelling residential parking spaces with EV charging	810 EV charging ports installed at new multi-family residential buildings.	3,380 EV charging ports installed at new multi-family residential buildings.	5,290 EV charging ports installed at new multi-family residential buildings.
New single-family residential parking spaces with EV charger outlet	680 EV charging outlets installed at new single-family residential buildings.	1,970 EV charging outlets installed at new single-family residential buildings.	3,600 EV charging outlets installed at new single-family residential buildings.
Existing non-residential parking spaces with EV charging	1,540 EV charging ports installed at existing non-residential buildings.	2,100 EV charging ports installed at existing non-residential buildings.	2,770 EV charging ports installed at existing non-residential buildings.
Existing multi-unit dwelling residential parking spaces with EV charging	1,850 EV charging ports installed at existing multi-family residential buildings.	2,570 EV charging ports installed at existing multi-family residential buildings.	3,530 EV charging ports installed at existing multi-family residential buildings.
Existing additional public parking spaces with EV charging	38 EV charging ports installed at existing public locations.	60 EV charging ports installed at existing public locations.	60 EV charging ports installed at existing public locations.
Number of light-duty electric vehicles purchased or leased	5,510 light-duty electric vehicles purchased or leased	10,840 light-duty electric vehicles purchased or leased.	16,110 light-duty electric vehicles purchased or leased

# APPENDIX 1

## GHG Method

The project team relied on data from the Strive San Mateo General Plan 2040 Land Use Element for the projected buildout of nonresidential buildings in San Mateo, along with data from Association of Bay Area Governments (ABAG) Plan Bay Area on projected buildout of households in San Mateo out to 2050, to estimate the number of new buildings that would be impacted by an electric vehicle charging infrastructure new construction reach code. The team used permit data from the U.S. Department of Housing and Urban Development to estimate the percent of new residential units that will be single family or duplex vs. 3+ unit multifamily. Using assumptions regarding the building square footage per new development parking space, the team identified the total number of parking spaces associated with multi-family residential and commercial development, assuming an increasing percentage of new development parking spaces will be required to be built electric vehicle (EV) capable to accommodate electric vehicle supply equipment (EVSE). The team looked at how the deployment of EVSE in new development is projected to increase the rate at which residents and employees will replace gasoline vehicles with EVs, and estimated how the increased adoption of EVs is likely to decrease the VMT (and associated gasoline and diesel consumption) from gasoline and diesel vehicles and increase the VMT (and associated electricity use) from EVs. The team then applied emission factors for avoided gasoline and diesel consumption, and increased electricity use, and took the difference as the net reduction in GHG emissions.

## GHG Sources

California Air Resources Board. 2022. "EMFAC2021 Web Database."

NREL, 2018. "CEC EV Infrastructure Projection Tool (EVI-Pro)."

U.S. Census Bureau. 2017. "American Community Survey."

U.S. Department of Energy. 2019. "www.fueleconomy.gov."

U.S. Department of Housing and Urban Development. 2019. "State of the Cities Data Systems."

U.S. Department of Transportation Federal Highway Administration. 2016. "Average miles driven per year by state."

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## CF 2 Electric vehicle education and outreach

### Assumptions

	2030	2040	2045
Target percent of total community Transportation Network Company (TNC) VMT from electric vehicles	30%	45%	60%
Target percent total community VMT from electric vehicles	30%	60%	70%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	-4,334,040	-6,786,810	-10,211,980
Emissions reduction (MTCO <sub>2</sub> e)	4,910	8,030	12,360

### Performance Indicators

	2030	2040	2045
Annual additional VMT travelled by EV TNCs	17,528,180 vehicle miles travelled by internal combustion engine transportation network companies vehicles replaced with electric vehicles.	30,375,160 vehicle miles travelled by internal combustion engine transportation network companies vehicles replaced with electric vehicles.	45,704,900 vehicle miles travelled by internal combustion engine transportation network companies vehicles replaced with electric vehicles.

### GHG Method

The projected team relied on forecasted total community VMT from passenger vehicles and estimates from the City of San Francisco on the percent of total community VMT from Transportation Network Companies (TNCs) to estimate the total annual VMT from TNCs in City of San Mateo. The team assumed that the policy or program aimed at regulating or incentivizing TNCs to increase adoption of EVs will results in a specific percent of TNCs being EVs by a given target year, and then estimated how the increased adoption of TNC EVs will decrease the VMT (and associated gasoline consumption) associated with gasoline vehicles and increase the VMT (and

# APPENDIX 1

associated electricity consumption) associated with EVs. The team applied the emission factor for avoided gasoline consumption, and an emissions factor for increased electricity use. The difference between the two results is the net GHG reduction from this measure.

## GHG Sources

California Air Resources Board, 2022. "EMFAC2021 Web Database."

San Francisco County Transportation Authority. 2017. "TNCs Today: A Profile of San Francisco Transportation Network Company Activity."

US Department of Energy. 2019. [www.fueleconomy.gov](http://www.fueleconomy.gov).

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## CF 3 Clean City fleet

### GHG Assumptions

	2030	2040	2045
Percent of City vehicles replaced with EVs	25%	45%	60%
Percent of City vehicles fueled by biomethane	15%	20%	25%

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	-105,540	-212,500	-319,750
Emissions reduction (MTCO <sub>2</sub> e)	130	200	270

### Performance Indicators

	2030	2040	2045
Fleet EV VMT	610,020	1,250,360	1,779,020
Fleet biomethane VMT	366,010	555,720	741,260

### GHG Method

The projected team looked at State projections for regional increases in electric and natural gas (including biomethane) vehicles and applied these proportions to the City municipal fleet. The team then took the local projections for increases in electric and natural gas vehicles in the municipal fleet and identified the increase in electric and natural gas VMT resulting from local policies. The team then adjusted the natural gas VMT to account for the different energy density of natural gas and gasoline/diesel and calculated the increase in electricity resulting from greater municipal EV adoption. Lastly, the team applied emission factors, taking the net difference between decreased VMT emissions from electric and natural gas vehicle adoption and increased electricity use as the overall GHG benefit.



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## GHG Sources

City of San Mateo. 2007. *City of San Mateo Greenhouse Gas Emissions Inventory Report*. <https://www.cityofsanmateo.org/DocumentCenter/View/5262/APPENDIX-S-October24-2007?bidId=>

ICLEI Local Governments for Sustainability USA. 2012. *US Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions*. <http://www.icleiusa.org/tools/ghgprotocol/community-protocol>.

Gable, C., and Gable, S. 2019. "Gasoline Gallon Equivalents (GGE)." <https://www.thoughtco.com/fuel-energy-comparisons-85636>.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## CF 4 Clean fuel

### GHG Assumptions

	2030	2040	2045
Target % total community VMT from hydrogen vehicles	8%	30%	45%

### Activity and GHG Reductions

	2030	2040	2045
Electricity savings (kWh)	-2,186,300	-8,413,180	-13,430,770
Emissions reduction (MTCO <sub>2</sub> e)	4,210	16,920	26,360

### Performance Indicators

	2030	2040	2045
Number of heavy-duty hydrogen vehicles purchased or leased	260 hydrogen fuel heavy-duty cell vehicles purchased or leased .	1,110 hydrogen fuel cell heavy-duty vehicles purchased or leased .	1,770 hydrogen fuel cell heavy-duty vehicles purchased or leased .

### GHG Method

The project team estimated how the deployment of hydrogen fueling stations will increase the rate at which residents and employees will replace heavy-duty gasoline and diesel vehicles with hydrogen fuel cell vehicles (FCVs). The team analyzed how the increased adoption of FCVs is likely to decrease the VMT (and associated gasoline consumption) associated with heavy-duty gasoline diesel vehicles and increase the VMT (and associated hydrogen consumption) associated with FCVs. The team used data from the U.S. Department of Energy on the efficiency of the electrolysis process to estimate the amount of electricity required to produce hydrogen. The team then applied an emission factor for avoided gasoline and diesel consumption to estimate the emissions reduction associated with reduced gasoline and diesel consumption, and an emission factor for electricity consumption to estimate the emissions increase associated with increased electricity use. The net resulting emissions is the estimated emissions avoided from the policy.

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## GHG Sources

California Air Resources Board, 2022. "EMFAC2021 Web Database."

California Air Resources Board, 2023. "Final 2022 Scoping Plan – AB 32 GHG Inventory Sectors Modeling Data Spreadsheet." <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>.

US Department of Energy, 2019. [www.fueleconomy.gov](http://www.fueleconomy.gov).

U.S. Department of Energy, 2019. "DOE Technical Targets for Hydrogen Production from Electrolysis."

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## ST 1 Bicycle mode share

### GHG Assumptions

	2020	2030	2050
Additional miles of bike lanes	22	45.2	45.2

### Activity and GHG Reduction

	2020	2030	2050
Travel savings (VMT)	300,960	704,120	751,370
Emissions reduction (MTCO <sub>2</sub> e)	80	170	180

### Performance Indicators

	2020	2030	2050
Total miles of bike lanes	78	101	101

### GHG Method

The project team identified projected increase in bike lanes from implementation of the Bicycle Master Plan. Based on the proposed additional miles of bike lanes in San Mateo, the team followed the recommendations of the California Air Pollution Control Officer's Association to estimate the projected decrease in VMT as a result. The team then applied the appropriate emissions factors to calculate the GHG reduction.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

City of San Mateo. 2019. *City of San Mateo Bicycle Master Plan*. <https://www.cityofsanmateo.org/3944/Bicycle-Master-Plan-Update>.

# APPENDIX 1

## ST 2 Pedestrian mode share

### GHG Assumptions

It is assumed that all new development occurs in infill areas (areas with existing development)

### Activity and GHG Reduction

	2020	2030	2050
Travel savings (VMT)	436,590	497,160	530,520
Emissions reduction (MTCO <sub>2</sub> e)	110	120	130

### Performance Indicators

There are no performance indicators associated with this measure.

### GHG Method

Using the Pedestrian Master Plan, the project team identified the existing and planned miles of sidewalks and pedestrian pathways in San Mateo. The team applied a method recommended by the California Air Pollution Control Officers Association to determine the VMT reduction, and then applied the appropriate emissions factor to calculate GHG reductions.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

City of San Mateo. 2012. "Citywide Pedestrian Master Plan." <https://www.cityofsanmateo.org/2218/Pedestrian-Master-Plan>

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## ST 3 Micromobility and shared mobility

### **GHG assumptions, activity and GHG reductions, and performance indicators.**

This is a supportive measure, due to the lack of sufficient data or a feasible method of quantification that would avoid double-counting reductions with other measures. As a result, there are no assumptions, activity or GHG reductions, and performance indicators associated with this measure.

### **GHG Method**

Supportive measures do not produce direct, measurable GHG reductions, so no calculations were made.

### **GHG Sources**

Supportive measures do not produce direct, measurable GHG reductions. There are no sources for GHG reduction calculations for supportive measures.

# APPENDIX 1

## ST 4 Public transit service

### GHG Assumptions

	2030	2040	2045
Bus coverage	15%	20%	20%
Percent increase in Caltrain service	25%	40%	50%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	-10,253,31	-23,468,340	-31,189,470
Travel savings (VMT)	13,770,100	23,451,790	29,098,510
Emissions reduction (MTCO <sub>2</sub> e)	3,610	5,660	6,910

### Performance Indicators

	2030	2040	2045
Bus commute share	15%	20%	20%
Average Caltrain daily ridership in San Mateo	8,070	12,900	15,720

### GHG Method

For increases in the bus coverage network, the project team made an assumption regarding the percentage increase in bus network miles. Using methods from the California Air Pollution Control District, the project team determined the VMT reduction that would occur given this increase in network coverage, and then applied the appropriate GHG emissions factor. For an increase in Caltrain service frequency, the project team reviewed Caltrain's existing business plan and projected increases in service under the "Moderate Growth" scenario, then applied this increase to San Mateo. Using factors from the inventory and existing/planned activity calculations, the team determined the VMT reduction from increased Caltrain service as well as the increase in electricity use due to Caltrain becoming a mostly electric system. The team applied the appropriate emissions factors to the difference in VMT to calculate a reduction in emissions.



# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

Caltrain. 2020. *Caltrain Business Plan Summary Report*.  
<https://www.caltrain.com/media/24042/download?inline>.

Caltrain. 2019. *Caltrain Business Plan: Developing a Long-Range Vision for Caltrain*. [https://caltrain2040.org/wp-content/uploads/CBP\\_CIA\\_R2\\_Booklet\\_SanMateo-2.pdf](https://caltrain2040.org/wp-content/uploads/CBP_CIA_R2_Booklet_SanMateo-2.pdf).

U.S. Census Bureau. 2023. 2014 – 2019 American Community Survey 5-Year Estimates, B08006: Sex of Workers by Means of Transportation to Work [data table].

# APPENDIX 1

## ST 5 Commuter programs

### GHG Assumptions

	2030	2040	2045
Percent of existing employers (pre-2006) participating in TDM	5%	20%	30%
Average trip reduction from voluntary TDM participation, beyond other CAP measures	8%	30%	40%

### Activity and GHG Reduction

	2030	2040	2045
Travel savings (VMT)	15,290	278,640	669,000
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	70	160

### Performance Indicators

	2030	2040	2045
Existing (pre-2006) businesses participating in TDM efforts	130	540	810

### GHG Method

The project team identified the amount of commute-related VMT from personal vehicles associated with existing businesses and applied the projected metrics from voluntary participation in Transportation Demand Management (TDM) programs to determine the total VMT reduction from implementation of this measure. The team then used the appropriate emissions factors to calculate GHG reductions. It is assumed that these TDM standards would go beyond trip reductions associated with other measures in the CAP, as the goal of TDM efforts is to reduce trip generation below the level that would otherwise occur if the TDM requirement was not in place.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## ST 6 Transportation Demand Management

### GHG Assumptions

	2030	2040	2045
Percent of new developments subject to TDM rules	90%	90%	90%
Average trip reduction from new development subject to TDM rules, beyond other CAP measures	10%	15%	20%

### Activity and GHG Reduction

	2030	2040	2045
Travel savings (VMT)	7,646,580	32,944,170	56,484,350
Emissions reduction (MTCO <sub>2</sub> e)	2,010	7,950	13,410

### Performance Indicators

	2030	2040	2045
Service population in new development (2018 and later) subject to the TDM ordinance	29,940	65,680	86,010

### GHG Method

The project team determined the number of new people and jobs in developments that would be subject to TDM rules, excluding those already identified through the existing and planned activities assessment. Using projections of future TDM standards, the project team determined the amount of VMT that would be reduced by future TDM requirements, then converted this reduction to a decrease in GHG emissions. It is assumed that these TDM standards would go beyond trip reductions associated with other measures in the CAP, as the goal of TDM efforts is to reduce trip generation below the level that would otherwise occur if the TDM requirement was not in place.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

# APPENDIX 1

## ST 7 Transit-oriented development

### GHG Assumptions

	2030	2040	2045
Percent of new units in areas supporting transit-oriented development	95%	95%	95%
Percent of new nonresidential square footage in areas supporting transit-oriented development	90%	90%	90%

### Activity and GHG Reduction

	2030	2040	2045
Travel savings (VMT)	38,865,630	78,398,130	99,833,910
Emissions reduction (MTCO <sub>2</sub> e)	10,200	18,920	23,700

### Performance Indicators

	2030	2040	2045
New development in TOD zones	9,610 households and 7,350 employees	20,330 households and 14,880 employees	26,520 households and 18,970 employees

### GHG Method

The project team identified the anticipated development in areas that support transit-oriented development and used geospatial analysis to obtain a reasonable estimate of the new growth potential in these areas. The team then used resources from the California Air Pollution Control Officers Association to determine the VMT reduction associated with transit-oriented development in these areas, then applied the appropriate emissions factors to calculate GHG reductions.

### GHG Sources

California Air Pollution Control Officers Association. 2021. "Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity."

City of San Mateo. 2018. Area plans [GIS file].

City of San Mateo. 2018. SMRoadCenterline [GIS file].

Metropolitan Transportation Commission. 2017. Major\_Transit\_Stops\_2017 [GIS file].

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## SW 1 Composting program

### GHG Assumptions

	2030	2040	2045
Residential composting participation rate	90%	93%	95%
Nonresidential composting participation rate	85%	88%	90%

### Activity and GHG Reduction

	2030	2040	2045
Waste savings (tons)	2,350	3,900	4,220
Emissions reduction (MTCO <sub>2</sub> e)	1,030	1,710	1,850

### Performance Indicators

	2030	2040	2045
Composting participation levels	47,270 households and 3,890 businesses	59,020 households and 4,510 businesses	66,800 households and 4,880 businesses

### GHG Method

The project team reviewed the number of future projected residences and nonresidential buildings participating in the community's composting program, removing the currently participating customers to only focus on growth in the composting program. The team used results of a statewide waste characterization study to estimate the total amount of organic waste generated by the participants and combined this information with technical factors for waste decomposition by materials to identify the total reduction in GHG emissions.

### GHG Sources

California Air Resources Board. 2010. *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories* version 1.1. [https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo\\_protocol\\_v1\\_1\\_2010-05-03.pdf](https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf)

California Air Resources Board. 2011. *Landfill Emissions Tool* version 1.3. <https://ww3.arb.ca.gov/cc/landfills/landfills.htm>

California Department of Resources Recycling and Recovery. 2020. *2018 Disposal-Facility-Based Characterization of Solid Waste in California*. <https://www2.calrecycle.ca.gov/Publications/Details/1546>.

City of San Mateo. 2022. *2022 Climate Action Plan Annual Progress Report*. <https://www.cityofsanmateo.org/3962/CAP-Progress-Updates>

# APPENDIX 1

## SW 2 Expanded recycling service

### GHG Assumptions

	2030	2040	2045
Target diversion rate	85%	88%	90%

### Activity and GHG Reduction

	2030	2040	2045
Waste savings (tons)	9,860	12,570	14,330
Emissions reduction (MTCO <sub>2</sub> e)	6,070	7,730	8,820

### Performance Indicators

	2030	2040	2045
Total tons of recyclables recovered (curbside bins only)	22,450	27,420	30,480

### GHG Method

The project team looked at projections of how San Mateo's diversion rate from curbside recycling may increase in future years and used statewide waste characterization studies to identify the amounts of various material types that could be recovered from this increase. The team then applied the results of technical studies about waste decomposition to determine the total GHG reductions that would result from increased waste collection.

### GHG Sources

California Air Resources Board. 2010. *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories* version 1.1. [https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo\\_protocol\\_v1\\_1\\_2010-05-03.pdf](https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf)

California Air Resources Board. 2011. *Landfill Emissions Tool* version 1.3. <https://ww3.arb.ca.gov/cc/landfills/landfills.htm>

California Department of Resources Recycling and Recovery. 2020. *2018 Disposal-Facility-Based Characterization of Solid Waste in California*. <https://www2.calrecycle.ca.gov/Publications/Details/1666>.

Chow, A. 2023. City of San Mateo. Personal communication to E. Krispi, PlaceWorks. April 24.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## SW 3 Waste awareness and source reduction

### GHG Assumptions

	2030	2040	2045
Decrease in non-organic and non-recyclable waste tonnage	5%	20%	50%

### Activity and GHG Reduction

	2030	2040	2045
Waste savings (tons)	15,420	30,110	41,510
Emissions reduction (MTCO <sub>2</sub> e)	2,080	4,050	5,590

### Performance Indicators

	2030	2040	2045
Decrease in non-organic and non-recyclable waste tonnage sent to landfills	15,420	30,110	41,510

### GHG Method

The project team looked at statewide waste characterization studies to determine the amount of materials being produced in San Mateo that could not be recycled or composted (including construction and demolition wastes) and used technical studies about waste characterization to determine the GHG emissions associated with a ton of this waste material. The project team then examined projections about waste awareness potential to identify how much of this waste could be reduced in future years and combined these two outcomes to determine the total GHG savings.

### GHG Sources

California Air Resources Board. 2010. *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories* version 1.1.  
[https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo\\_protocol\\_v1\\_1\\_2010-05-03.pdf](https://ww3.arb.ca.gov/cc/protocols/localgov/pubs/lgo_protocol_v1_1_2010-05-03.pdf)

California Air Resources Board. 2011. *Landfill Emissions Tool* version 1.3.  
<https://ww3.arb.ca.gov/cc/landfills/landfills.htm>

California Department of Resources Recycling and Recovery. 2020. *2018 Disposal-Facility-Based Characterization of Solid Waste in California*. <https://www2.calrecycle.ca.gov/Publications/Details/1666>.



# APPENDIX 1

## WW 1 Water-efficiency retrofits for existing buildings

### GHG Assumptions

	2030	2040	2045
Percent of existing homes retrofitting water fixtures	50%	70%	80%
Percent of existing businesses retrofitting water fixtures	40%	70%	80%
Percent of existing homes with greywater systems	5%	15%	20%
Percent of existing businesses with greywater systems	3%	10%	15%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	411,310	777,100	914,320
Water savings (millions of gallons)	160	280	340
Emissions reduction (MTCO <sub>2</sub> e)	170	300	360

### Performance Indicators

	2030	2040	2045
Number of water efficiency retrofits	19,890 existing homes and 1,610 existing businesses with water efficiency retrofits.	27,840 existing homes and 2,820 existing businesses with water efficiency retrofits.	31,820 existing homes and 3,230 existing businesses with water efficiency retrofits.
Number of greywater system installations as part of retrofit activities	2,120 homes and 120 businesses with greywater systems installed.	6,360 homes and 400 businesses with greywater systems installed.	8,480 homes and 610 businesses with greywater systems installed.

### GHG Method

Working on the assumption that half of greywater systems are laundry-to-landscaping, and that the other half uses greywater from additional sources such as wash basins and showers, the project team identified the water savings resulting from greywater systems for an individual home or business. The project team then used the

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

water savings to determine the decrease in electricity use and direct process emissions associated with this effort per building, and then applied the projections of greywater installations at existing San Mateo buildings as part of retrofit activities to identify the total water, electricity, and direct process emissions. The team applied the appropriate electricity emissions coefficients to identify the additional GHG savings.

## GHG Sources

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# APPENDIX 1

## WW 2 Water-efficient landscaping

### GHG Assumptions

	2030	2040	2045
Reduction in total outdoor water use	10%	20%	25%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	374,760	827,380	1,086,620
Water savings (millions of gallons)	260	570	750
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	10	0

### GHG Method

The team estimated the total water use that occurs outdoors in San Mateo and determined the amount that would be reduced based on assumed participation levels. The project team then used the water savings to determine the decrease in electricity use associated with this effort and applied the appropriate electricity emissions coefficients to identify the GHG savings.

### GHG Sources

There are no sources for this measure beyond the inventory and forecast.

# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## WW 3 Water efficiency in new construction

### GHG Assumptions

	2030	2040	2045
Percent of new homes installing greywater systems	8%	20%	25%
Percent of new businesses installing greywater systems	5%	15%	20%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	7,620	40,580	66,320
Water savings (millions of gallons)	10	30	50
Emissions reduction (MTCO <sub>2</sub> e)	Less than 10	10	10

### Performance Indicators

	2030	2040	2045
Number of new homes with greywater systems	810	4,280	6,980
Number of new businesses with greywater systems	30	160	280

### GHG Method

Working on the assumption that half of greywater systems are laundry-to-landscaping, and that the other half uses greywater from additional sources such as wash basins and showers, the project team identified the water savings resulting from greywater systems for an individual home or business. The project team then used the water savings to determine the decrease in electricity use and direct process emissions associated with this effort per building, and then applied the projections of greywater installations at new San Mateo buildings to identify the total water, electricity, and direct process emissions. The team applied the appropriate electricity emissions coefficients to identify the additional GHG savings.

# APPENDIX 1

## GHG Sources

Alliance for Water Efficiency. 2009. *Making Every Drop Work: Increasing Water Efficiency in California's Commercial, Industrial, and Institutional (CII) Sector*.  
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# TECHNICAL APPENDIX: METHODS AND ASSUMPTIONS

## OR 1 Alternative fuel off-road equipment

### GHG Assumptions

	2030	2040	2045
Percent of landscaping equipment that uses electricity	20%	45%	60%
Percent of other off-road equipment that uses electricity	15%	25%	30%

### Activity and GHG Reduction

	2030	2040	2045
Electricity savings (kWh)	-2,201,600	-4,633,000	-6,091,990
Emissions reduction (MTCO <sub>2</sub> e)	3,660	7,130	9,890

### GHG Method

The team used data from the California Air Resources Board and the inventory to identify the reduction in direct emissions per percent of landscaping equipment and non-landscaping off-road equipment converted to electricity traded in. The team then estimated the decrease in gasoline and diesel fuel resulting from this effort and used information about energy density to determine the increase in electricity needs. The team estimated the GHG increase from greater electricity needs and subtracted this from the emission reduction from decreased fuel use to determine the net GHG reduction.

### GHG Sources

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# We Can Model Regional Emissions, But Are the Results Meaningful for CEQA?

Authors: AEP Climate Change Committee (Michael Hendrix, Dave Mitchell, Haseeb Qureshi, Jennifer Reed, Brian Schuster, Nicole Vermilion, and Rich Walters)

On December 24, 2018, the California Supreme Court, *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S219783 (*Friant Ranch*), held that simply identifying that a project exceeds an emissions threshold is not sufficient to identify a project's significant effect on the environment relative to the health effects of project emissions. The Court found that an EIR should make a reasonable effort to substantively connect a project's criteria pollutant emissions to likely health consequences, or explain why it is not currently feasible to provide such an analysis. In 2019, there were several CEQA documents that included health effects modeling to provide additional analysis for projects with criteria air pollutant emissions that exceed a significance threshold. While it is technically possible to conduct this modeling, we argue that this additional layer of quantitative analysis may not always provide decision-makers and the public with additional meaningful information. It is the air districts that are best suited to provide frameworks for how to identify health effects of regional criteria pollutant emissions under CEQA.

## Introduction

Significance thresholds for regional criteria pollutants used by California air districts and lead agencies represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard (AAQS). By analyzing the project's emissions against these thresholds, the CEQA document assesses whether these emissions directly contribute to any regional or local exceedances of the applicable AAQS and exposure levels. The basis of the ruling in *Friant Ranch* was that the EIR did not provide a meaningful analysis of the adverse health effects that would be associated with the project's criteria pollutant emissions, which were identified as being far above the relevant thresholds. The discussion of the adverse health effects in the EIR was general in nature and did not connect the levels of the pollutants that would be emitted by the project to adverse health effects.

The process of correlating project-related criteria pollutant emissions to health-based consequences is called a health impact assessment (HIA). An HIA involves two steps: 1) running a regional photochemical grid model (PGM) to estimate the small increases in concentrations of ozone and particulate matter (PM) in the region as a result of a project's emissions of criteria and precursor pollutants; and 2) running the U.S. EPA Benefits Mapping and Analysis Program (BenMAP) to estimate the resulting health impacts from these increases in concentrations of ozone and PM.

## Limitations of Regional-Scale Dispersion Models

It is technically feasible to conduct regional-scale criteria pollutant modeling for a development project. Particulate matter (PM) can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur oxides (SO<sub>x</sub>) and NO<sub>x</sub>. Ozone (O<sub>3</sub>) is a secondary pollutant formed from the oxidation of reactive organic gases (ROGs) and nitrogen oxides (NO<sub>x</sub>) in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of PM and ozone can occur far from the original emissions source from regional transport due to wind and topography (e.g. low-level jet stream). As such, modeling concentrations of secondary PM and ozone require photochemical grid models (PGMs), such as CMAQ and CAMx. These models have a much larger "grid" system and much lower resolution than localized dispersion modeling (e.g., AERMOD). For example, common grid cells in PGMs are 4x4 kilometers, while AERMOD can identify concentrations at the meter-level.



Photochemical modeling also depends on all emission sources in the entire domain. Low resolution and spatial averaging produces “noise” and model uncertainty that can exceed a project’s specific emissions. Additionally, regional-scale models are highly contingent upon background concentrations. Factors such as meteorology and topography greatly affect the certainty levels of predicted concentrations at receptor points. As a result, there are statistical ranges of uncertainty through all the modeling steps. Due to these factors, it is difficult to predict ground-level secondary PM and ozone concentrations associated with relatively small emission sources with a high degree of certainty. While it is possible to use a regional-scale model to predict these regional concentrations, when a project’s emissions are less than the regional model’s resolution, the resultant ambient air quality concentrations will be within the margin of uncertainty. In CEQA terms, this would fit the definition of “speculative”. Only when the scale of emissions would result in changes in ambient air quality beyond the model margin of uncertainty would the results not be “speculative” as defined by CEQA.

## Identifying Health Effects due to Ambient Air Quality Changes

BenMap is a model developed by the USEPA to understand the health effects from changes in ozone and PM concentrations. If there is an acceptable level of confidence that the results provided by the regional dispersion modeling are valid, then these concentrations can be translated into health outcomes using BenMap. The health outcomes in BenMap are based on changes in ambient air concentrations and the population exposed to these changes. Data provided by this analysis may indicate increased number of workdays lost to illness, hospital admissions (respiratory), emergency room visits (asthma), or mortality, among other health effects. These are called “health incidences.”

Translating the incremental increase in PM and ozone concentrations to specific health effects is also subject to uncertainty. For example, regional models assign the same toxicity to PM regardless of the source of PM (such as road dust as exhaust), and thus potentially overpredict adverse health effects of PM. BenMap also assumes that health effects can occur at any concentration, including small incremental concentrations, and assumes that impacts seen at large concentration differences can be linearly scaled down to small increases in concentration, with no consideration of potential thresholds below which health impacts may not occur. Additionally, BenMap is used for assessing impacts over large areas and populations and was not intended to be used for individual projects. For health incidences, the number of hospitalizations or increase in morbidity predicted by BenMap is greatly affected by the population characteristics.<sup>1</sup> Small increases in emissions in an area with a high population have a much greater affect than large increases in emissions over an area with a small population. As a result, the same amount of emissions generated in an urban area could result in greater health consequences than if the same emissions occurred on the urban periphery, where fewer people may be affected. This will also depend on other factors including meteorology and photochemistry, as discussed above. Emissions in areas with conditions that favor high air dispersion or unfavorable ozone formation will likely have relatively lower effects on ambient air quality and health outcomes.

While BenMap provides additional statistical information about health consequences requested by the Court in the Friant Ranch decision, this information is only meaningful when presented with the full health context of the region or locality at hand. For example, if the BenMap analysis says that the project would result in two additional hospital admissions, this result alone is not useful unless one identifies how many hospital admissions are caused by poor air quality now (without the project) and how many hospital admissions occur

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<sup>1</sup> BenMap assigns prevalence rate for asthma and other health effects based on indicators such as gender, race, age, ethnicity, etc. The BenMap user manual specifically states that there are a wide range of variables that can be included in the health effect function. The health effect function was developed based on epidemiological studies, and specifically states that “there are a number of issues that arise when deriving and choosing between health effect functions that go well beyond this user manual. Hence, it is important to have a trained health researcher assist in developing the impact function data file.”

overall (due to air quality and other causes). Because health is not solely influenced by ambient air quality, and has many factors that are highly variable across geographies and populations, there is an added level of uncertainty in using a generalized identification of health effects due to air quality conditions overlaid onto a specific diverse set of health conditions and other factors. Regardless of the uncertainty levels, if regional health effects are identified for a project, then the CEQA analysis needs to provide a full health baseline for decision-makers and the public to be able to understand the marginal change due to project criteria pollutant emissions. Given the margin of uncertainty at each step in the process (regional scale modeling, existing ambient air quality effects on health, population health conditions vulnerability, and marginal health effects of air pollution), the identification of marginal health effects due to individual projects using regional air quality modelling and tools such as BenMap are likely to be within the level of uncertainty and thus defined as “speculative” per CEQA.

## The Role of Air Districts

Regional, community, multiscale air quality modeling conducted by the air districts for each individual air basin or locality within the air basin would be the most appropriate indicator of health effects for projects. The AQMPs provide a forecast of regional emissions based on regional dispersion modeling for all sources within the air basin. Regional-scale models attempt to account for all emissions sources within an air basin.

The regional scale model requires inputs such as existing and future regional sources of pollutants and global meteorological data, which are generally not accessible by CEQA practitioners. Modeling of future years should consider future concentrations of air pollutants based on regional growth projections and existing programs, rules, and regulations adopted by Federal, State, and local air districts. In general, air pollution in California is decreasing as a result of Federal and State laws. Based on the air quality management plans (AQMPs) required for air districts in a nonattainment area, air quality in the air basins are anticipated to improve despite an increase in population and employment growth. Air districts are charged with assessing programs, rules, and regulations so that the increase in population and employment does not conflict with the mandate to achieve the AAQS. Because emissions forecasting and health outcomes based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should also fall on the air districts to identify the potential health outcomes associated with individual project's criteria pollutant emissions.

The South Coast Air Quality Management District (South Coast AQMD) and the Sacramento Metropolitan Air Quality Management District (Sacramento Metropolitan AQMD) are exploring concepts for project-level analysis in light of Friant Ranch to assist local lead agencies.

- » South Coast AQMD is looking at the largest land use development project they have had in the air basin and doing a sensitivity analysis (using CAMx for photochemical grid modeling and BenMap for health outcomes) to see how locating a very large project in different parts of the air basin (Los Angeles, Inland Empire, v. Orange County) would affect the health incidence.
- » Sacramento Metropolitan AQMD is also looking at a screening process. Rather than looking at the upper end (i.e., largest project in the air basin), Sacramento Metropolitan AQMD is starting at the smallest project that exceeds the regional significance threshold and running CAMx and BenMap at different locations in the air basin to see how it affects regional health incidences.

Guidance from Air Districts would be the most effective way to incorporate meaningful information concerning regional health effects of project criteria pollutants in CEQA analyses, including guidance as to when modelling is and is not useful and meaningful, how modelling should be conducted, and how to best present additional information to inform decision-makers and the public about a project's impacts.

So...until air districts do their part, what should we do?

### **PROJECTS WITH CRITERIA POLLUTANT EMISSIONS BELOW AIR DISTRICT THRESHOLDS**

The Friant Ranch ruling was about providing disclosure of health effects of project emissions that were well over the significance thresholds. Since the air district thresholds are tied to a level the air districts find to not have a significant effect on ambient air quality, there should be no need to discuss the health effects of criteria pollutant emissions that are less than the significance thresholds.

### **PROJECTS WITH CRITERIA POLLUTANT EMISSIONS ABOVE AIR DISTRICT THRESHOLDS**

Pursuant to Section 15125 of the CEQA Guidelines, the environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. For CEQA, the health effects associated with buildout of a project would occur at the project's horizon year. Because CEQA requires an analysis of the change from existing conditions, the change in effects would be associated with changes in ambient air quality and associated health outcomes between existing conditions and the project's horizon year. Therefore, in order to show how a project affects health outcomes in an air basin, the CEQA documents will need to qualitatively or quantitatively address: (1) existing ambient criteria pollutant concentrations, health incidences due to existing air quality, and health incidences overall; 2) future (without project) ambient criteria pollutant concentrations and health incidences, and 3) future (with project) ambient criteria pollutant concentrations and health incidences.

Projects with significant criteria pollutant emissions could use regional modelling and BenMap to identify health effects of project emissions, but it is likely that many (or most) projects that are not regionally substantial in scale will be shown to have minimal regional changes in PM and ozone concentrations and therefore minimal changes in associated health effects. In addition, many projects may have emissions that are less than the uncertainty level of regional air quality models and BenMap health effects modeling; in these cases, quantitative results will not be meaningful. Thus, absent better direction from air districts, CEQA lead agencies will have to determine on a case by case basis whether a qualitative discussion of health effects will suffice, or whether regional modeling, despite its limitations, should be conducted for the project.

Where a project has substantial criteria pollutant emissions when considered on a regional scale, and there is reason to believe that the modeling of ambient air quality and regional health effects would produce non-speculative results when considering modeling uncertainties, then CEQA lead agencies should use regional modelling.

## **Conclusion**

The purpose of CEQA is to inform the public as to the potential for a project to result in one or more significant adverse effects on the environment (including health effects). A CEQA document must provide an understandable and clear environmental analysis and provide an adequate basis for decision making and public disclosure. Regional dispersion modeling of criteria pollutants and secondary pollutants like PM and ozone can provide additional information, but that information may be within the margin of modelling uncertainty and/or may not be meaningful for the public and decision-makers unless a full health context is presented in the CEQA document. Simply providing health outcomes based on use of a regional-scale model and BenMap may not satisfy the goal to provide decision-makers and the public with information that would assist in weighting the environmental consequences of a project. A CEQA document must provide an analysis that is understandable for decision making and public disclosure. Regional scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation.

In order to accurately connect the dots, we urge California air districts to provide more guidance on how to identify and describe the health effects of exceeding regional criteria pollutant thresholds. The air districts are the primary agency responsible for ensuring that the air basins attain the AAQS and ensure the health and welfare of its residents relative to air quality. Because emissions forecasting and health outcomes are based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should fall on the air districts to identify the potential health outcomes associated with exceeding the CEQA thresholds for projects. The air districts should provide lead agencies with a consistent, reliable, and meaningful analytical approach to correlate specific health effects that may result from a project's criteria pollutant emissions.

## Glossary

AAQS – Ambient Air Quality Standards

BenMap – Benefits Mapping and Analysis Program

CAMx – Comprehensive Air Quality Model with extensions

CMAQ – Community Multiscale Air Quality

NOx – Nitrogen Oxides

PM – Particulate Matter

SOx – Sulfur Oxides

State – California

USEPA – United States Environmental Protection Agency

**S219783**

**IN THE SUPREME COURT OF CALIFORNIA**

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SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
LEAGUE OF WOMEN VOTERS OF FRESNO,

Plaintiffs and Appellants,

v.

COUNTY OF FRESNO,

Defendant and Respondent,

and,

FRIANT RANCH, L.P.,

Real Party in Interest and Respondent.

SUPREME COURT  
FILED

APR 13 2015

Frank A. McGuire Clerk  
Deputy

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After a Published Decision by the Court of Appeal, filed May 27, 2014  
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno  
Case No. 11CECG00726  
Honorable Rosendo A. Pena, Jr.

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**APPLICATION OF THE SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT FOR LEAVE TO FILE  
BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY  
AND [PROPOSED] BRIEF OF *AMICUS CURIAE***

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**CLERK SUPREME COURT**

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**TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE  
SUPREME COURT:**

**APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF**

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this amicus brief in support of neither party.

**HOW THIS BRIEF WILL ASSIST THE COURT**

SCAQMD's proposed amicus brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

- 1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
- 2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review de novo.

This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

#### **STATEMENT OF INTEREST OF *AMICUS CURIAE***

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

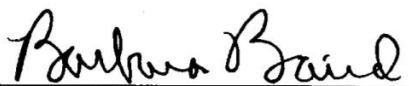
## CERTIFICATION REGARDING AUTHORSHIP AND FUNDING

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

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## BRIEF OF AMICUS CURIAE

### SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, “[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.” (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 [“*Laurel Heights I*”]) Accordingly, “an agency must use its best efforts to find out and disclose all that it reasonably can.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)<sup>1</sup>). However, “[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible.” (*Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project’s pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

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<sup>1</sup> The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq.*

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

## **ARGUMENT**

### **I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.**

#### **A. Air Quality Regulatory Background**

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality

management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP* (Feb. 2013), <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “chapter 7” hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP* (Feb. 2013), <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Executive Summary” hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called “criteria” document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called “criteria pollutants.” EPA must then establish “national ambient air quality standards” at levels “requisite to protect public health”,

allowing “an adequate margin of safety.” (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), <http://www.epa.gov/air/criteria.html> (last updated Oct. 21, 2014).)<sup>2</sup>

Under the Clean Air Act, EPA sets emission standards for motor vehicles and “nonroad engines” (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as “stationary sources.” The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified “major” stationary sources use technology to achieve the “lowest achievable emission rate,” and to control minor stationary sources as

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<sup>2</sup> Particulate matter (PM) is further divided into two categories: fine particulate or PM<sub>2.5</sub> (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM<sub>10</sub>) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), <http://www.epa.gov/airquality/particulatepollution/> (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called “hazardous air pollutants” calling for EPA to establish “maximum achievable control technology” (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as “toxic air contaminants” (TACs) which are subject to two state-required programs. The first program requires “air toxics control measures” for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare “health risk assessments” for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as “significant,” the facility must implement a “risk reduction plan” to bring its risk levels below “significant” levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv>; then follow “Rule 1401” hyperlink (last visited Apr. 1, 2015).)

## **B. The SCAQMD's Role Under CEQA**

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the “lead agency” that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called “responsible” agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to “trustee agencies” and agencies “with jurisdiction by law” including “authority over resources which may be affected by the project.” (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.<sup>3</sup>

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<sup>3</sup> The SCAQMD's CEQA program for its rules is a “Certified Regulatory Program” under which it prepares a “functionally equivalent” document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)

The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.<sup>4</sup> SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a “responsible agency” for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii>; then follow “Rule 1303” hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with “jurisdiction by law” over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

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<sup>4</sup> The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)



(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015>; then follow “16. Lead Agency Projects and Environmental Documents Received by SCAQMD” hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, *supra*, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

**II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT’S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.**

Numerous cases hold that courts do not review the correctness of an EIR’s conclusions but rather its sufficiency as an informative document. (*Laurel Heights 1*, *supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

*Bd. of Supervisors* (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must “draw[] a line that divides *sufficient* discussions from those that are *insufficient*.” (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4<sup>th</sup> 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that “[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis.” (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that “the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.” Case law reflects this: “Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible.” (*Association of Irrigated Residents v. County of Madera, supra*, 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be “feasible”; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a “health risk assessment” before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the “maximally exposed individual” (worker and residence exposures). (*See, e.g.*, SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it

is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588)*, pp. 11-16; (last visited Apr. 1, 2015) [http://www.aqmd.gov/home/library/documents-support-material](http://www.aqmd.gov/home/library/documents-support-material;); "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, <http://www.aqmd.gov/home/forms>; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from

the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants<sup>5</sup>, such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, <http://www.epa.gov/airquality/ozonepollution/> (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, <http://www.epa.gov/ttnamti1/archive/cpreldoc.html> (last visited Apr. 1, 2015).) NO<sub>x</sub> and VOC are known as “precursors” of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population*, Figure 9, <http://www.epa.gov/apti/ozonehealth/population.html#levels> (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO<sub>x</sub> by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP* (February 2013), <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Appendix V: Modeling & Attainment Demonstrations” hyperlink,

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<sup>5</sup> See discussion of types of pollutants, *supra*, Part I.A.

pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO<sub>x</sub> or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO<sub>x</sub> and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts “internal bank” of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.<sup>6</sup> The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO<sub>x</sub> (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).<sup>7</sup> (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6) at p. 4.1-35, Table 4.1-29.)

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<sup>6</sup> (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6*, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011>; the follow “26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System” (last visited April 1, 2015).)

<sup>7</sup> The SCAQMD was able to establish the location of future NO<sub>x</sub> and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO<sub>x</sub> or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO<sub>x</sub> with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; <https://www.epa.gov/ttnamti1/archive/cpreldoc.html>; then search “Guideline on Ozone Monitoring Site Selection” click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA “significance” threshold for NO<sub>x</sub> and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>; then follow “SCAQMD Air Quality Significance Thresholds” hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a “major” stationary source for “extreme” ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA “significance” finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO<sub>x</sub> or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD’s thresholds of significance may determine

that many projects have “significant” air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter (PM<sub>2.5</sub>)<sup>8</sup>, another “criteria” pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of PM<sub>2.5</sub>. (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, [http://www.arb.ca.gov/research/health/pm-mort/pm-mort\\_arch.htm](http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm) (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional PM<sub>2.5</sub> in the District, up to 2.82 tons/day (5,650 lbs/day of PM<sub>2.5</sub>, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this PM<sub>2.5</sub> health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties.<sup>9</sup> (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

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<sup>8</sup> SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for “PM<sub>2.5</sub>” or particulate matter less than 2.5 microns in diameter.

<sup>9</sup> Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)



*E&P, Inc. WTU Central Facility, New Equipment Project* (certified July 19, 2011), <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011>; then follow “Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project” hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small PM<sub>2.5</sub> increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated PM<sub>2.5</sub> emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the “normal” “existing conditions” CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.<sup>10</sup>

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<sup>10</sup> Whether a particular study would result in “informational value” is a part of deciding whether it is “feasible.” CEQA defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.<sup>11</sup> Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, <http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm> (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

### **III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.**

#### **A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document**

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

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technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

<sup>11</sup> In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

As this Court has explained, “a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts.” (*Vineyard Area Citizens v. City of Rancho Cordova*, *supra*, 40 Cal.4th at 435.) For questions regarding compliance with proper procedure or other legal questions, courts review an agency’s action de novo under the “independent judgment” test. (*Id.*) On the other hand, courts review factual disputes only for substantial evidence, thereby “accord[ing] greater deference to the agency’s substantive factual conclusions.” (*Id.*)

Here, Friant Ranch and Sierra Club agree that the case involves the question of whether an EIR includes sufficient information regarding a project’s impacts. However, they disagree on the proper standard of review for answering this question: Sierra Club contends that courts use the independent judgment standard to determine whether an EIR’s analysis is sufficient to meet CEQA’s informational purposes,<sup>12</sup> while Friant Ranch contends that the substantial evidence standard applies to this question.

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<sup>12</sup> Sierra Club acknowledges that courts use the substantial evidence standard when reviewing predicate factual issues, but argues that courts ultimately decide as a matter of law what CEQA requires. (Answering Brief, pp. 14, 23.)

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,<sup>13</sup> containing two levels of inquiry that should be judged by different standards.<sup>14</sup>

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which 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 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.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

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<sup>13</sup> Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

<sup>14</sup> Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its *sufficiency as an informative document*." (*Laurel Heights I, supra*, 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra*, 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.

(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses “in sufficient detail to enable meaningful participation and criticism by the public. ‘[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.’” (*Laurel Heights I, supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority, supra*, 57 Cal.4th 439, 448, 457:

whether “existing conditions” baseline would be misleading or uninformative judged by substantial evidence standard.<sup>15</sup>)

If the lead agency’s determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA’s information disclosure provisions, since it would be infeasible to provide additional information. This Court’s decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency’s finding that “the precise parameters of future herbicide use could not be predicted.” *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4<sup>th</sup> 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact “substantial”. (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

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<sup>15</sup> The substantial evidence standard recognizes that the courts “have neither the resources nor the scientific expertise” to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra*, 47 Cal.3d 376, 393.)



requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA's informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a "project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary." (*Laurel Heights I, supra*, 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA "does not require a lead agency to conduct every test. . . recommended or demanded by commenters."].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA's informational purposes.<sup>16</sup>

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<sup>16</sup> We recognize that there is case law stating that the substantial evidence standard applies to "challenges to the scope of an EIR's analysis of a topic" as well as the methodology used and the accuracy of the data relied on in the document "because these types of challenges involve factual questions." (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed "omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project." *Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> at p. 1220. Therefore, the court must not have interpreted this question as one of the "scope of the analysis" to be judged by the substantial evidence standard.

**B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.**

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra*, at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR . . . ." (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra*, at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "... leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, “Environmental Checklist Form.”<sup>17</sup>) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency’s noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts’ proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA’s prohibition on courts interpreting its provisions “in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines.” (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra*, at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project’s significant impacts on human health. However, except in certain particular circumstances,<sup>18</sup> neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law’s requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe “health and safety problems caused by {a project’s} physical changes”].) Accordingly, courts must interpret CEQA as a whole to

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<sup>17</sup> Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

<sup>18</sup> E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.<sup>19</sup> Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

#### **IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS**

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4<sup>th</sup> 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck*, 198 Cal.App.4th at p. 959 (citations omitted).<sup>20</sup>

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<sup>19</sup> We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131), or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

<sup>20</sup> Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta*, (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)<sup>21</sup>

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districts should be considered “state agencies” for purposes of the requirement to consult with “trustee agencies” as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere “local agencies” whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id.* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

<sup>21</sup> In *Schenck*, the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck*, 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district’s published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district’s published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those

Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay, supra*, 91 Cal.App.4th 1344, 1369-1371.)

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guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra*, 70 Cal.App.4th 482, 492.



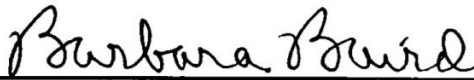
## CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is “sufficient as an informational document” is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

DATED: April 3, 2015

Respectfully submitted,

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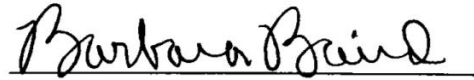
*Attorneys for Amicus Curiae*  
*SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT*

## **CERTIFICATE OF WORD COUNT**

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015

Respectfully submitted,

  
Barbara Baird

## **PROOF OF SERVICE**

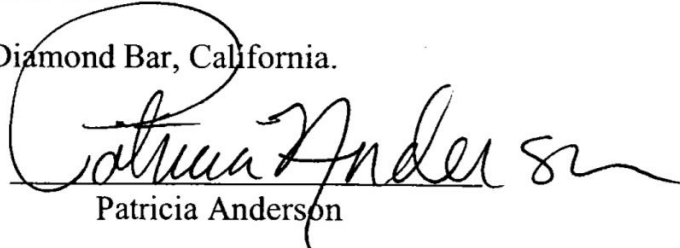
I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND [PROPOSED] BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

**BY MAIL:** I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.

  
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SUPREME COURT COPY

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

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SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
LEAGUE OF WOMEN VOTERS OF FRESNO,  
*Plaintiffs and Appellants*

v.

COUNTY OF FRESNO,  
*Defendant and Respondent*

FRIANT RANCH, L.P.,  
*Real Party in Interest and Respondent*

SUPREME COURT  
FILED

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Frank A. McGuire, Clerk  
Deputy

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After a Decision by the Court of Appeal, filed May 27, 2014  
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno  
Case No. 11CECG00726

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**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF  
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN  
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND  
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

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## **APPLICATION**

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

### **1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District**

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality



conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a “serious nonattainment” area to come into attainment of health-based National Ambient Air Quality Standard (“NAAQS”) for coarse particulate matter (PM<sub>10</sub>), an achievement made even more notable given the Valley's extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of “extreme” nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates “smog” and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to “offset” vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)<sup>1</sup>, ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

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<sup>1</sup> San Joaquin’s incentive program has been so successful that through 2012, it has awarded over \$ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. See SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) available at <http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206%20Incentives.pdf>.

Valley counties and cities that implement the California Environment Quality Act (CEQA).<sup>2</sup> In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.<sup>3</sup> Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.<sup>4</sup> For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.<sup>5</sup>

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

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<sup>2</sup> See, e.g., SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), available at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf) ("CEQA Guidance").

<sup>3</sup> Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

<sup>4</sup> See, e.g., CEQA Guidance at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf), pp. 64-66, 80.

<sup>5</sup> See, e.g., CEQA Guidance at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf), pp. 66, 99-101.

pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).<sup>6</sup> The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

## **2. How the Proposed Amicus Curiae Brief Will Assist the Court**

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

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<sup>6</sup> CEQA does not require speculation. *See, e.g., Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

#### **Rule 8.520 Disclosure**

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

#### **CONCLUSION**

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015



Annette A. Ballatore-Williamson  
District Counsel  
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY UNIFIED  
AIR POLLUTION CONTROL  
DISTRICT

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## **I. INTRODUCTION.**

The San Joaquin Valley Unified Air Pollution Control District (“Air District”) respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report (“EIR”) for the Friant Ranch development project was inadequate under the California Environmental Quality Act (“CEQA”) because it did not include an analysis of the correlation between the project’s criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court’s holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as “TACs”) regulated by the United States Environmental Protection Agency (“EPA”) and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health,

they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully

appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

**II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.**

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

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**A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.**

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.<sup>1</sup> Once formed, ozone can be transported long distances by wind.<sup>2</sup> Because of the complexity of ozone formation, a specific tonnage amount of NO<sub>x</sub> or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NO<sub>x</sub> or VOCs can have high levels of ozone concentration simply due to wind transport.<sup>3</sup> Conversely, the San Francisco Bay Area has six times more NO<sub>x</sub> and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

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<sup>1</sup> See United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: <http://www.epa.gov/airquality/ozonepollution/basic.html> (visited March 10, 2015).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*



concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.<sup>4</sup>

Particulate matter (“PM”) can be divided into two categories: directly emitted PM and secondary PM.<sup>5</sup> While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.<sup>6</sup> Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO<sub>x</sub>) and NO<sub>x</sub>.<sup>7</sup> Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NO<sub>x</sub>, SO<sub>x</sub> and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards (“NAAQS”), which are statutorily required to be set by the United States Environmental Protection

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<sup>4</sup> *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Ozone\\_2007\\_Adopted/03%20Executive%20Summary.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf) (visited March 10, 2015).

<sup>5</sup> United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: <http://www.epa.gov/airquality/particlepollution/basic.html> (visited March 10, 2015).

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

Agency (“EPA”) at levels that are “requisite to protect the public health,” 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.<sup>8</sup>

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.<sup>9</sup> Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District’s tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO<sub>x</sub>, SO<sub>x</sub> and VOCs) and the atmospheric chemistry and meteorology of the Valley.<sup>10</sup> At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

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<sup>8</sup> See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: <http://www.epa.gov/air/criteria.html#3> (visited March 10, 2015).

<sup>9</sup> *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf](http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf) (visited March 10, 2015).

<sup>10</sup> *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM<sub>2.5</sub> Plan*, Appendix F, pp. F-2 – F-5, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Final\\_Adopted\\_PM2.5/20%20Appendix%20F.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf) (visited March 19, 2015).

emissions Valley wide.<sup>11</sup> Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.<sup>12</sup>

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.<sup>13</sup> The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.<sup>14</sup> This "offset"

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<sup>11</sup> *Id.*

<sup>12</sup> Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. See San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: <http://www.valleyair.org/rules/curnrules/Rule22010411.pdf> (visited March 19, 2015).

<sup>13</sup> *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: <http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf> (visited March 30, 2015).

<sup>14</sup> *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.<sup>15</sup> In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club, supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, “cumulative impacts.”

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

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<sup>15</sup> <sup>15</sup> *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: <http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20August%202000.pdf> (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NO<sub>x</sub> inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.<sup>16</sup> Running the photochemical grid model used for predicting ozone attainment with the

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<sup>16</sup> *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Ozone\\_2007\\_Adopted/19%20Appendix%20B%20April%202007.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf) (visited March 12, 2015).

emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

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**B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.**

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated



with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

[t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)<sup>17</sup> The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)<sup>18</sup> The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

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<sup>17</sup> Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

<sup>18</sup> Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "[T]he objections must be sufficiently specific so that the agency has the

opportunity to evaluate and respond to them.’ [Citation.]” *Sierra Club v. City of Orange*, 163 Cal.App.4<sup>th</sup> at 536.<sup>19</sup>

As discussed above, the City’s comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since “[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action.” *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4<sup>th</sup> 1184, 1199, 22 Cal.Rptr.3d 203.

### III. CONCLUSION

For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal’s decision requiring an analysis correlating the localized human health impacts associated with an individual project’s criteria air pollutant emissions be reversed.

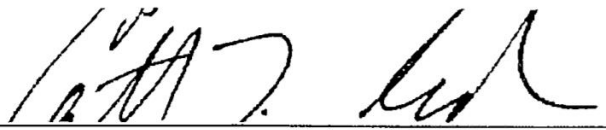
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<sup>19</sup> *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or “piecemealed” the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as “the use of a single document for both a project-level and a program-level EIR [is] ‘confusing’,” and “[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,” were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4<sup>th</sup> at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015

A handwritten signature in black ink, appearing to read 'C. Redmond', is written over a horizontal line.

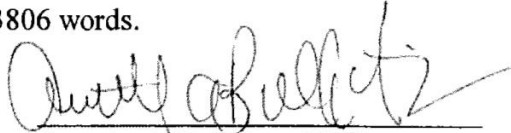
Catherine T. Redmond  
Attorney for Proposed Amicus  
Curiae

SAN JOAQUIN VALLEY  
UNIFIED  
AIR POLLUTION CONTROL  
DISTRICT

## **CERTIFICATE OF WORD COUNT**

Pursuant to Rule 8.204 of the California Rules of Court, I hereby certify that this document, based on the Word County feature of the Microsoft Word software program used to compose and print this document, contains, exclusive of caption, tables, certificate of word count, signature block and certificate of service, 3806 words.

Dated: April 2, 2015

A handwritten signature in cursive script, appearing to read "Annette A. Ballatore-Williamson", written over a horizontal line.

Annette A. Ballatore-Williamson  
District Counsel (SBN 192176)

*Sierra Club et al, v. County of Fresno, et al*  
**Supreme Court of California Case No.: S219783**  
Fifth District Court of Appeal Case No.: F066798  
Fresno County Superior Court Case No.: 11CECG00726

**PROOF OF SERVICE**

I am over the age of 18 years and not a party to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF  
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN  
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO**

On all parties to this action at the following addresses and in the following manner:

**PLEASE SEE ATTACHED SERVICE LIST**

- (XX) **(BY MAIL)** I caused a true copy of each document(s) to be laced in a sealed envelope with first-class postage affixed and placed the envelope for collection. Mail is collected daily at my office and placed in a United State Postal Service collection box for pick-up and delivery that same day.
- ( ) **(BY ELECTRONIC MAIL)** I caused a true and correct scanned image (.PDF file) copy to be transmitted via electronic mail transfer system in place at the San Joaquin Valley Unified Air Pollution Control District ("District"), originating from the undersigned at 1990 E. Gettysburg Avenue, Fresno, CA, to the address(es) indicated below.
- ( ) **(BY OVERNIGHT MAIL)** I caused a true and correct copy to be delivered via Federal Express to the following person(s) or their representative at the address(es) listed below.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I executed this document on April 2, 2015, at Fresno, California.

  
\_\_\_\_\_  
Esthela Soto



**SERVICE LIST**

***Sierra Club et al, v. County of Fresno, et al***

**Supreme Court of California Case No.: S219783**

**Fifth District Court of Appeal Case No.: F066798**

**Fresno County Superior Court Case No.: 11CECG00726**

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## A P P E N D I X   D

### N O I S E   D A T A



## APPENDIX D1: BASELINE NOISE MEASUREMENTS





Project Name: San Mateo General Plan

Date: 11/17/2022

Project Number: 2023-039.01

Monitoring Personnel: RH

Monitoring Site #: Short Term - 1

Time Start: 3:16 PM End: 3:31 PM

Site Location/Address: Across from San Mateo High School. 792 E Poplar Avenue

Primary Noise Source: Passing car, children playing

Measurement Results	
Percentiles	dBA
Leq	64.0
Lmax	74.0
Lmin	47.2
L2	71
L8	68.5
L25	65.0
L50	61.8
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
3:16 PM	Low	54.4
3:17 PM	Standard passing car	71.8
3:18 PM	New Low	47.7

Comments (sound walls, height, etc.): Chain link fence behind monitor (10 feet)

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
E Poplar Avenue	2		191		



Summary				
File Name on Meter	LxT_Data.009.s			
File Name on PC	LxT_0005427-20221117 151617-LxT_Data.009.ldbin			
Serial Number	0005427			
Model	SoundTrack LxT®			
Firmware Version	2.404			
User				
Location				
Job Description				
Note				
Measurement				
Description				
Start	2022-11-17 15:16:17			
Stop	2022-11-17 15:31:04			
Duration	00:14:47.5			
Run Time	00:14:47.5			
Pause	00:00:00.0			
Pre-Calibration	2022-11-17 15:15:02			
Post-Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	146.7 dB			
	A	C	Z	
Under Range Peak	102.6	99.6	104.6 dB	
Under Range Limit	39.7	39.4	46.5 dB	
Noise Floor	30.6	30.3	37.4 dB	
	First	Second	Third	
Instrument Identification				
Results				
LASeq	64.0 dB			
LASE	93.5 dB			
EAS	247.700 µPa²h			
EAS8	8.038 mPa²h			
EAS40	40.190 mPa²h			
LZpeak (max)	2022-11-17 15:18:31	102.6 dB		
LASmax	2022-11-17 15:20:44	74.0 dB		
LASmin	2022-11-17 15:18:42	47.2 dB		
SEA	-99.9 dB			
	Exceedance Counts	Duration		
LAS > 85.0 dB	0	0.0 s		
LAS > 115.0 dB	0	0.0 s		
LZpeak > 135.0 dB	0	0.0 s		

LZ<sub>peak</sub> > 137.0 dB 0 0.0 s  
 LZ<sub>peak</sub> > 140.0 dB 0 0.0 s

LCSeq 71.3 dB  
 LASeq 64.0 dB  
 LCSeq - LASeq 7.3 dB  
 LA<sub>leq</sub> 66.2 dB  
 LA<sub>eq</sub> 64.0 dB  
 LA<sub>leq</sub> - LA<sub>eq</sub> 2.2 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	64.0					
LS(max)	74.0	2022/11/17 15:20:44				
LS(min)	47.2	2022/11/17 15:18:42				
LPeak(max)					102.6	2022/11/17 15:18:31

Overload Count 0  
 Overload Duration 0.0 s

Dose Settings		
Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results		
Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	48.9	48.9 dB

Statistics	
LAS 2.00	71.0 dB
LAS 8.00	68.5 dB
LAS 25.00	65.0 dB
LAS 50.00	61.8 dB
LAS 90.00	51.5 dB
LAS 99.00	48.2 dB

Project Name: San Mateo General Plan

Date: 11/17/2022

Project Number: 2023-039.01

Monitoring Personnel: RH

Monitoring Site #: Short Term - 2

Time Start: 3:50 PM End: 4:05 PM

Site Location/Address: 100 W Poplar Avenue

Primary Noise Source: Passing cars

Measurement Results	
Percentiles	dBA
Leq	59.1
Lmax	73.6
Lmin	39.7
L2	68.6
L8	65.0
L25	56.2
L50	50.2
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
3:50 PM	Passing car	69.1
3:51 PM	Low	44.8
3:53 PM	Plane overhead	57.7
3:59 PM	Passing car	67.1

Comments (sound walls, height, etc.): Brick 1

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
W Poplar Avenue	2		28		





Summary			
File Name on Meter	LxT_Data.011.s		
File Name on PC	LxT_0005427-20221117 155014-LxT_Data.011.ldbin		
Serial Number	0005427		
Model	SoundTrack LxT®		
Firmware Version	2.404		
User			
Location			
Job Description			
Note			

Measurement			
Description			
Start	2022-11-17 15:50:14		
Stop	2022-11-17 16:05:18		
Duration	00:15:04.0		
Run Time	00:15:04.0		
Pause	00:00:00.0		
Pre-Calibration	2022-11-17 15:15:02		
Post-Calibration	None		
Calibration Deviation	---		

Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	146.7 dB			
	A	C	Z	
Under Range Peak	102.6	99.6	104.6 dB	
Under Range Limit	39.7	39.4	46.5 dB	
Noise Floor	30.6	30.3	37.4 dB	
	First	Second	Third	
Instrument Identification				

Results				
LASeq	59.1 dB			
LASE	88.7 dB			
EAS	81.644 μPa²h			
EAS8	2.601 mPa²h			
EAS40	13.005 mPa²h			
LZpeak (max)	2022-11-17 16:04:49	101.3 dB		
LASmax	2022-11-17 15:54:29	73.6 dB		
LASmin	2022-11-17 15:58:58	39.7 dB		
SEA	-99.9 dB			
	Exceedance Counts		Duration	
LAS > 85.0 dB	0		0.0 s	
LAS > 115.0 dB	0		0.0 s	
LZpeak > 135.0 dB	0		0.0 s	

LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 66.3 dB  
 LASeq 59.1 dB  
 LCSeq - LASeq 7.2 dB  
 LAleq 62.8 dB  
 LAeq 59.1 dB  
 LAleq - LAeq 3.7 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	59.1					
LS(max)	73.6	2022/11/17 15:54:29				
LS(min)	39.7	2022/11/17 15:58:58				
LPeak(max)					101.3	2022/11/17 16:04:49

Overload Count 0  
 Overload Duration 0.0 s

Dose Settings		
Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results		
Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	44.1	44.1 dB

Statistics		
LAS 2.00	68.6 dB	
LAS 8.00	65.0 dB	
LAS 25.00	56.2 dB	
LAS 50.00	50.2 dB	
LAS 90.00	44.9 dB	
LAS 99.00	41.9 dB	

Project Name: San Mateo General Plan

Date: 11/17/2022

Project Number: 2023-039.01

Monitoring Personnel: RH

Monitoring Site #: Short Term - 3

Time Start: 4:18 PM End: 4:34 PM

Site Location/Address: 725 Patricia Avenue

Primary Noise Source: Passing cars

Measurement Results	
Percentiles	dBA
Leq	54.4
Lmax	75.4
Lmin	44.3
L2	64.5
L8	54.8
L25	49.4
L50	47.7
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
4:19 PM	Average level	54.7
4:23 PM	Passing car	65.2

Comments (sound walls, height, etc.): Shrubs 10 feet behind monitor

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
Patricia Avenue	2		9		



Summary				
File Name on Meter	LxT_Data.012.s			
File Name on PC	LxT_0005427-20221117 161854-LxT_Data.012.ldbin			
Serial Number	0005427			
Model	SoundTrack LxT®			
Firmware Version	2.404			
User				
Location				
Job Description				
Note				
Measurement				
Description				
Start	2022-11-17 16:18:54			
Stop	2022-11-17 16:34:14			
Duration	00:15:20.5			
Run Time	00:15:19.5			
Pause	00:00:01.0			
Pre-Calibration	2022-11-17 15:15:02			
Post-Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	146.7 dB			
	A	C	Z	
Under Range Peak	102.6	99.6	104.6 dB	
Under Range Limit	39.7	39.4	46.5 dB	
Noise Floor	30.6	30.3	37.4 dB	
	First	Second	Third	
Instrument Identification				
Results				
LASeq	54.4 dB			
LASE	84.0 dB			
EAS	28.139 µPa²h			
EAS8	881.353 µPa²h			
EAS40	4.407 mPa²h			
LZpeak (max)	2022-11-17 16:19:14	102.9 dB		
LASmax	2022-11-17 16:26:05	75.4 dB		
LASmin	2022-11-17 16:23:04	44.3 dB		
SEA	-99.9 dB			
	Exceedance Counts	Duration		
LAS > 85.0 dB	0	0.0 s		
LAS > 115.0 dB	0	0.0 s		
LZpeak > 135.0 dB	0	0.0 s		

LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 64.8 dB  
 LASeq 54.4 dB  
 LCSeq - LASeq 10.4 dB  
 LAleq 58.2 dB  
 LAeq 54.4 dB  
 LAleq - LAeq 3.8 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	54.4					
LS(max)	75.4	2022/11/17 16:26:05				
LS(min)	44.3	2022/11/17 16:23:04				
LPeak(max)					102.9	2022/11/17 16:19:14

Overload Count 0  
 Overload Duration 0.0 s

Dose Settings		
Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results		
Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	39.4	39.4 dB

Statistics	
LAS 2.00	64.5 dB
LAS 8.00	54.8 dB
LAS 25.00	49.4 dB
LAS 50.00	47.7 dB
LAS 90.00	46.1 dB
LAS 99.00	45.1 dB

Project Name: San Mateo General Plan

Date: 11/18/2022

Project Number: 2023-039.01

Monitoring Personnel: RH

Monitoring Site #: Short Term - 4

Time Start: 7:39 AM End: 4:54 AM

Site Location/Address: 1405 South Delaware Street

Primary Noise Source: Passing cars, passing train

Measurement Results	
Percentiles	dBA
Leq	67.0
Lmax	78.4
Lmin	49.0
L2	73.6
L8	71.6
L25	68.9
L50	63.4
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
7:40 AM	Passing train	75.7
7:41 AM	Regular passing car	70.9
7:43 AM	Low	54.7

Comments (sound walls, height, etc.):

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
S Delaware Street	2		86		





## Summary

File Name on Meter	LxT_Data.017.s
File Name on PC	LxT_0005427-20221118 073915-LxT_Data.017.ldbin
Serial Number	0005427
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

## Measurement

Description	
Start	2022-11-18 07:39:15
Stop	2022-11-18 07:54:21
Duration	00:15:05.9
Run Time	00:15:05.9
Pause	00:00:00.0
Pre-Calibration	2022-11-18 07:35:26
Post-Calibration	None
Calibration Deviation	---

## Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	146.7 dB		
	A	C	Z
Under Range Peak	102.7	99.7	104.7 dB
Under Range Limit	39.8	39.5	46.6 dB
Noise Floor	30.7	30.3	37.4 dB
	First	Second	Third
Instrument Identification			

## Results

LASeq	67.0 dB	
LASE	96.6 dB	
EAS	504.473 $\mu\text{Pa}^2\text{h}$	
EAS8	16.038 $\text{mPa}^2\text{h}$	
EAS40	80.190 $\text{mPa}^2\text{h}$	
LZpeak (max)	2022-11-18 07:43:46	102.2 dB
LASmax	2022-11-18 07:43:46	78.4 dB
LASmin	2022-11-18 07:53:31	49.0 dB
SEA	-99.9 dB	
	Exceedance Counts	Duration
LAS > 85.0 dB	0	0.0 s
LAS > 115.0 dB	0	0.0 s

LZpeak > 135.0 dB 0 0.0 s  
 LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 72.3 dB  
 LASeq 67.0 dB  
 LCSeq - LASeq 5.3 dB  
 LAleq 69.6 dB  
 LAeq 67.0 dB  
 LAleq - LAeq 2.6 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	67.0					
LS(max)	78.4	2022/11/18 7:43:46				
LS(min)	49.0	2022/11/18 7:53:31				
LPeak(max)					102.2	2022/11/18 7:43:46

Overload Count 0  
 Overload Duration 0.0 s

#### Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

#### Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	52.0	52.0 dB

#### Statistics

LAS 2.00	73.6 dB
LAS 8.00	71.6 dB
LAS 25.00	68.9 dB
LAS 50.00	63.4 dB
LAS 90.00	52.8 dB
LAS 99.00	50.0 dB

Project Name: San Mateo General Plan

Date: 11/17/2022

Project Number: 2023-039.01

Monitoring Personnel:

Monitoring Site #: Short Term - 5

Time Start: 4:47 PM End: 5:02 PM

Site Location/Address: 1501 S. Norfolk Street

Primary Noise Source: Passing cars, airplanes

Measurement Results	
Percentiles	dBA
Leq	66.1
Lmax	77.4
Lmin	48.7
L2	72.8
L8	70.3
L25	67.2
L50	63.5
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
4:49 PM	Loud car	76.3

Comments (sound walls, height, etc.): None

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
S Norfolk Street			96		



Summary				
File Name on Meter	LxT_Data.013.s			
File Name on PC	LxT_0005427-20221117 164750-LxT_Data.013.ldbin			
Serial Number	0005427			
Model	SoundTrack LxT®			
Firmware Version	2.404			
User				
Location				
Job Description				
Note				
Measurement				
Description				
Start	2022-11-17 16:47:50			
Stop	2022-11-17 17:02:55			
Duration	00:15:05.4			
Run Time	00:15:05.4			
Pause	00:00:00.0			
Pre-Calibration	2022-11-17 15:15:02			
Post-Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	146.7 dB			
	A	C	Z	
Under Range Peak	102.6	99.6	104.6 dB	
Under Range Limit	39.7	39.4	46.5 dB	
Noise Floor	30.6	30.3	37.4 dB	
	First	Second	Third	
Instrument Identification				
Results				
LASeq	66.1 dB			
LASE	95.7 dB			
EAS	409.824 µPa²h			
EAS8	13.036 mPa²h			
EAS40	65.181 mPa²h			
LZpeak (max)	2022-11-17 16:53:33	103.5 dB		
LASmax	2022-11-17 16:49:38	77.4 dB		
LASmin	2022-11-17 16:48:34	48.7 dB		
SEA	-99.9 dB			
	Exceedance Counts	Duration		
LAS > 85.0 dB	0	0.0 s		
LAS > 115.0 dB	0	0.0 s		
LZpeak > 135.0 dB	0	0.0 s		

LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 73.7 dB  
 LASeq 66.1 dB  
 LCSeq - LASeq 7.6 dB  
 LAleq 69.0 dB  
 LAeq 66.1 dB  
 LAleq - LAeq 2.9 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	66.1					
LS(max)	77.4	2022/11/17 16:49:38				
LS(min)	48.7	2022/11/17 16:48:34				
LPeak(max)					103.5	2022/11/17 16:53:33

Overload Count 0  
 Overload Duration 0.0 s

Dose Settings		
Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results		
Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	51.1	51.1 dB

Statistics	
LAS 2.00	72.8 dB
LAS 8.00	70.3 dB
LAS 25.00	67.2 dB
LAS 50.00	63.5 dB
LAS 90.00	56.2 dB
LAS 99.00	50.2 dB



Project Name: San Mateo General Plan

Date: 11/17/2022

Project Number: 2023-039.01

Monitoring Personnel: RH

Monitoring Site #: Short Term - 6

Time Start: 5:15 PM End: 5:30 PM

Site Location/Address: Mariners Island Boulevard and Armada Way; Southeast intersection

Primary Noise Source: Passing cars

Measurement Results	
Percentiles	dBA
Leq	65.2
Lmax	77.5
Lmin	46.4
L2	74.5
L8	71.1
L25	64.2
L50	57.5
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
5:20 PM	Passing car	74.0
5:27 PM	Low	46.7
5:29 PM	Loud car	73.6

Comments (sound walls, height, etc.): None

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
Mariners Island Boulevard	4		49		



Summary				
File Name on Meter	LxT_Data.014.s			
File Name on PC	LxT_0005427-20221117 171527-LxT_Data.014.ldbin			
Serial Number	0005427			
Model	SoundTrack LxT®			
Firmware Version	2.404			
User				
Location				
Job Description				
Note				
Measurement				
Description				
Start	2022-11-17 17:15:27			
Stop	2022-11-17 17:30:30			
Duration	00:15:03.3			
Run Time	00:15:03.3			
Pause	00:00:00.0			
Pre-Calibration	2022-11-17 15:15:02			
Post-Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	146.7 dB			
	A	C	Z	
Under Range Peak	102.6	99.6	104.6 dB	
Under Range Limit	39.7	39.4	46.5 dB	
Noise Floor	30.6	30.3	37.4 dB	
	First	Second	Third	
Instrument Identification				
Results				
LASeq	65.2 dB			
LASE	94.8 dB			
EAS	332.345 µPa²h			
EAS8	10.596 mPa²h			
EAS40	52.981 mPa²h			
LZpeak (max)	2022-11-17 17:15:33	105.5 dB		
LASmax	2022-11-17 17:15:32	77.5 dB		
LASmin	2022-11-17 17:17:40	46.4 dB		
SEA	-99.9 dB			
	Exceedance Counts	Duration		
LAS > 85.0 dB	0	0.0 s		
LAS > 115.0 dB	0	0.0 s		
LZpeak > 135.0 dB	0	0.0 s		

LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 70.2 dB  
 LASeq 65.2 dB  
 LCSeq - LASeq 5.0 dB  
 LAleq 68.0 dB  
 LAeq 65.2 dB  
 LAleq - LAeq 2.8 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	65.2					
LS(max)	77.5	2022/11/17 17:15:32				
LS(min)	46.4	2022/11/17 17:17:40				
LPeak(max)					105.5	2022/11/17 17:15:33

Overload Count 0  
 Overload Duration 0.0 s

Dose Settings		
Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results		
Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	50.2	50.2 dB

Statistics	
LAS 2.00	74.5 dB
LAS 8.00	71.1 dB
LAS 25.00	64.2 dB
LAS 50.00	57.5 dB
LAS 90.00	49.2 dB
LAS 99.00	47.1 dB

Project Name: San Mateo General Plan

Date: 11/18/2022

Project Number: 2023-039.01

Monitoring Personnel: RH

Monitoring Site #: Short Term - 7

Time Start: 8:08 AM End: 8:23 AM

Site Location/Address: 512 19th Avenue

Primary Noise Source: Highway and street cars

Measurement Results	
Percentiles	dBA
Leq	67.3
Lmax	76.3
Lmin	63.3
L2	72.2
L8	70.1
L25	67.7
L50	66.3
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
8:09 AM	Highway drone	66.9
8:10 AM	Added car pass	71.7
8:12 AM	Low	63.9

Comments (sound walls, height, etc.): None

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
19th Avenue	1		52		



## Summary

File Name on Meter	LxT_Data.018.s
File Name on PC	LxT_0005427-20221118 080852-LxT_Data.018.ldbin
Serial Number	0005427
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

## Measurement

Description	
Start	2022-11-18 08:08:52
Stop	2022-11-18 08:23:58
Duration	00:15:05.7
Run Time	00:15:05.7
Pause	00:00:00.0
Pre-Calibration	2022-11-18 07:35:26
Post-Calibration	None
Calibration Deviation	---

## Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	146.7 dB		
	A	C	Z
Under Range Peak	102.7	99.7	104.7 dB
Under Range Limit	39.8	39.5	46.6 dB
Noise Floor	30.7	30.3	37.4 dB
	First	Second	Third
Instrument Identification			

## Results

LASeq	67.3 dB	
LASE	96.9 dB	
EAS	540.434 $\mu\text{Pa}^2\text{h}$	
EAS8	17.185 $\text{mPa}^2\text{h}$	
EAS40	85.925 $\text{mPa}^2\text{h}$	
LZpeak (max)	2022-11-18 08:11:37	100.3 dB
LASmax	2022-11-18 08:21:51	76.5 dB
LASmin	2022-11-18 08:10:18	63.3 dB
SEA	-99.9 dB	
	Exceedance Counts	Duration
LAS > 85.0 dB	0	0.0 s
LAS > 115.0 dB	0	0.0 s



LZpeak > 135.0 dB 0 0.0 s  
 LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 74.5 dB  
 LASeq 67.3 dB  
 LCSeq - LASeq 7.2 dB  
 LAleq 68.2 dB  
 LAeq 67.3 dB  
 LAleq - LAeq 0.9 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	67.3					
LS(max)	76.5	2022/11/18 8:21:51				
LS(min)	63.3	2022/11/18 8:10:18				
LPeak(max)					100.3	2022/11/18 8:11:37

Overload Count 0  
 Overload Duration 0.0 s

#### Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

#### Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	52.3	52.3 dB

#### Statistics

LAS 2.00	72.2 dB
LAS 8.00	70.1 dB
LAS 25.00	67.7 dB
LAS 50.00	66.3 dB
LAS 90.00	64.9 dB
LAS 99.00	63.9 dB

Project Name: San Mateo General Plan

Date: 11/18/2022

Project Number: 2023-039.01

Monitoring Personnel: \_\_\_\_\_

Monitoring Site #: Short Term - 8

Time Start: 8:41 AM End: 8:56 AM

Site Location/Address: Franklin Parkway (250 bus stop)

Primary Noise Source: Passing car

Measurement Results	
Percentiles	dBA
Leq	64.8
Lmax	82.6
Lmin	43.5
L2	72.0
L8	70.0
L25	64.7
L50	57.9
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
8:42 AM	Peak car passing	72.1
8:44 AM	Low	50.4
8:51 AM	Bus passing	82.1

Comments (sound walls, height, etc.): None

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
Franklin Parkway	3		114		



## Summary

File Name on Meter	LxT_Data.019.s
File Name on PC	LxT_0005427-20221118 084144-LxT_Data.019.ldbin
Serial Number	0005427
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

## Measurement

Description	
Start	2022-11-18 08:41:44
Stop	2022-11-18 08:56:56
Duration	00:15:12.0
Run Time	00:15:12.0
Pause	00:00:00.0
Pre-Calibration	2022-11-18 07:35:26
Post-Calibration	None
Calibration Deviation	---

## Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	146.7 dB		
	A	C	Z
Under Range Peak	102.7	99.7	104.7 dB
Under Range Limit	39.8	39.5	46.6 dB
Noise Floor	30.7	30.3	37.4 dB
	First	Second	Third
Instrument Identification			

## Results

LASeq	64.8 dB	
LASE	94.4 dB	
EAS	306.022 $\mu\text{Pa}^2\text{h}$	
EAS8	9.664 $\text{mPa}^2\text{h}$	
EAS40	48.319 $\text{mPa}^2\text{h}$	
LZpeak (max)	2022-11-18 08:41:51	102.0 dB
LASmax	2022-11-18 08:51:06	82.6 dB
LASmin	2022-11-18 08:49:08	43.5 dB
SEA	-99.9 dB	
	Exceedance Counts	Duration
LAS > 85.0 dB	0	0.0 s
LAS > 115.0 dB	0	0.0 s

LZpeak > 135.0 dB 0 0.0 s  
 LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 70.4 dB  
 LASeq 64.8 dB  
 LCSeq - LASeq 5.6 dB  
 LAleq 67.2 dB  
 LAeq 64.8 dB  
 LAleq - LAeq 2.4 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	64.8					
LS(max)	82.6	2022/11/18 8:51:06				
LS(min)	43.5	2022/11/18 8:49:08				
LPeak(max)					102.0	2022/11/18 8:41:51

Overload Count 0  
 Overload Duration 0.0 s

#### Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

#### Results

Dose	-99.94	0.00 %
Projected Dose	-99.94	0.08 %
TWA (Projected)	-99.9	38.5 dB
TWA (t)	-99.9	13.6 dB
Lep (t)	49.8	49.8 dB

#### Statistics

LAS 2.00	72.0 dB
LAS 8.00	70.0 dB
LAS 25.00	64.7 dB
LAS 50.00	57.9 dB
LAS 90.00	46.4 dB
LAS 99.00	44.0 dB

Project Name: San Mateo General Plan

Date: 11/18/2022

Project Number: 2023-039.01

Monitoring Personnel: RH

Monitoring Site #: Short Term - 9

Time Start: 9:08 AM End: 9:23 AM

Site Location/Address: 506 Alameda de las Pulgas

Primary Noise Source: Passing car, airplanes, lawn mower in distance

Measurement Results	
Percentiles	dBA
Leq	63.5
Lmax	72.6
Lmin	47.0
L2	71.6
L8	68.0
L25	63.6
L50	59.9
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
9:13 AM	Car noise	73.1
9:14 AM	Ambient with mower	55.3
9:15 AM	Low ambient without mower	50.3
9:16 AM	Plane overhead	73.1

Comments (sound walls, height, etc.): No sound walls; gardeners with lawn mowers nearby  
(relocated 100 feet); airplane overhead

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
Alameda de las Pulgas	4		58		





## Summary

File Name on Meter	LxT_Data.020.s
File Name on PC	LxT_0005427-20221118 090800-LxT_Data.020.ldbin
Serial Number	0005427
Model	SoundTrack LxT®
Firmware Version	2.404
User	
Location	
Job Description	
Note	

## Measurement

Description	
Start	2022-11-18 09:08:00
Stop	2022-11-18 09:23:52
Duration	00:15:52.0
Run Time	00:15:52.0
Pause	00:00:00.0
Pre-Calibration	2022-11-18 07:35:26
Post-Calibration	None
Calibration Deviation	---

## Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	146.7 dB		
	A	C	Z
Under Range Peak	102.7	99.7	104.7 dB
Under Range Limit	39.8	39.5	46.6 dB
Noise Floor	30.7	30.3	37.4 dB
	First	Second	Third
Instrument Identification			

## Results

LASeq	63.5 dB	
LASE	93.3 dB	
EAS	236.807 $\mu\text{Pa}^2\text{h}$	
EAS8	7.164 $\text{mPa}^2\text{h}$	
EAS40	35.820 $\text{mPa}^2\text{h}$	
LZpeak (max)	2022-11-18 09:08:10	103.6 dB
LASmax	2022-11-18 09:23:29	77.6 dB
LASmin	2022-11-18 09:18:19	47.0 dB
SEA	-99.9 dB	
	Exceedance Counts	Duration
LAS > 85.0 dB	0	0.0 s
LAS > 115.0 dB	0	0.0 s

LZpeak > 135.0 dB 0 0.0 s  
 LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 70.3 dB  
 LASeq 63.5 dB  
 LCSeq - LASeq 6.8 dB  
 LAleq 65.6 dB  
 LAeq 63.5 dB  
 LAleq - LAeq 2.1 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	63.5					
LS(max)	77.6	2022/11/18 9:23:29				
LS(min)	47.0	2022/11/18 9:18:19				
LPeak(max)					103.6	2022/11/18 9:08:10

Overload Count 0  
 Overload Duration 0.0 s

#### Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

#### Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	48.7	48.7 dB

#### Statistics

LAS 2.00	71.6 dB
LAS 8.00	68.0 dB
LAS 25.00	63.6 dB
LAS 50.00	59.9 dB
LAS 90.00	51.7 dB
LAS 99.00	48.1 dB

Project Name: San Mateo General Plan

Date: 11/18/2022

Project Number: 2023-039.01

Monitoring Personnel: RH

Monitoring Site #: Short Term - 10

Time Start: 9:53 AM End: 10:08 AM

Site Location/Address: 931 W. Hillsdale Boulevard

Primary Noise Source: Cars passing

Measurement Results	
Percentiles	dBA
Leq	61.6
Lmax	76.0
Lmin	37.5
L2	69.4
L8	66.3
L25	62.5
L50	57.6
Other	
SEL/CNEL	

Observed Noise Sources/Events		
Time	Noise Source Event	dBA
9:55 AM	Low	43.2
9:56 AM	Bus passing	73.6
9:58 AM	Car passing	67.7
9:59 AM	Plan passing overhead	71.5
10:06 AM	New low	38.0

Comments (sound walls, height, etc.): No sound walls; car nearby, blocking noise a bit; trash truck nearby

Traffic counts in both directions:

Roadway	# Lanes	Posted Speed	Autos	MD	HD
W. Hillsdale Boulevard	2		49		



Summary			
File Name on Meter	LxT_Data.022.s		
File Name on PC	LxT_0005427-20221118 095343-LxT_Data.022.ldbin		
Serial Number	0005427		
Model	SoundTrack LxT®		
Firmware Version	2.404		
User			
Location			
Job Description			
Note			

Measurement			
Description			
Start	2022-11-18 09:53:43		
Stop	2022-11-18 10:08:48		
Duration	00:15:05.2		
Run Time	00:15:05.2		
Pause	00:00:00.0		
Pre-Calibration	2022-11-18 07:35:26		
Post-Calibration	None		
Calibration Deviation	---		

Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	146.7 dB			
	A	C	Z	
Under Range Peak	102.7	99.7	104.7 dB	
Under Range Limit	39.8	39.5	46.6 dB	
Noise Floor	30.7	30.3	37.4 dB	
	First	Second	Third	
Instrument Identification				

Results				
LASeq	61.6 dB			
LASE	91.2 dB			
EAS	145.379 μPa²h			
EAS8	4.625 mPa²h			
EAS40	23.127 mPa²h			
LZpeak (max)	2022-11-18 09:55:31	118.0 dB		
LASmax	2022-11-18 10:03:02	76.0 dB		
LASmin	2022-11-18 10:07:31	37.5 dB		
SEA	-99.9 dB			
	Exceedance Counts		Duration	
LAS > 85.0 dB	0		0.0 s	
LAS > 115.0 dB	0		0.0 s	
LZpeak > 135.0 dB	0		0.0 s	

LZpeak > 137.0 dB 0 0.0 s  
 LZpeak > 140.0 dB 0 0.0 s

LCSeq 71.8 dB  
 LASeq 61.6 dB  
 LCSeq - LASeq 10.2 dB  
 LAleq 65.5 dB  
 LAeq 61.6 dB  
 LAleq - LAeq 3.9 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	61.6					
LS(max)	76.0	2022/11/18 10:03:02				
LS(min)	37.5	2022/11/18 10:07:31				
LPeak(max)					118.0	2022/11/18 9:55:31

Overload Count 0  
 Overload Duration 0.0 s

Dose Settings		
Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results		
Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	46.6	46.6 dB

Statistics		
LAS 2.00	69.4 dB	
LAS 8.00	66.3 dB	
LAS 25.00	62.5 dB	
LAS 50.00	57.6 dB	
LAS 90.00	43.2 dB	
LAS 99.00	38.3 dB	

## APPENDIX D2: TRAFFIC NOISE CALCULATIONS





## TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: **2023-039.01**

Project Name: **City of San Mateo 2040 General Plan**

### Background Information

**Model Description:** FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.

**Source of Traffic Volumes:** Kittleson Transportation Consultants

**Community Noise Descriptor:** L :        x        CNEL:         
dn

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Existing Conditions Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway					Calc Dist
						Medium Trucks	Heavy Trucks	Ldn at 50 Feet	70 Ldn	Distance to Contour			
										65 Ldn	60 Ldn	55 Ldn	
Highway 101													
All of San Mateo	8	1.5	217,846	65	0	1.8%	0.7%	85.3	1,708	5,401	17,081	54,015	50
Interstate 280													
All of San Mateo	6	35	93,000	70	0	1.8%	0.7%	84.7	1,470	4,648	14,699	46,481	50
State Route 92													
Between City Limits & Mariners Island Blvd	6	1.5	106,668	65	0	1.8%	0.7%	80.4	549	1,737	5,493	17,372	50
Between Mariners Island Blvd & Hwy 101 Junction	6	30	156,688	65	0	1.8%	0.7%	84.7	1,462	4,623	14,619	46,230	50
Between Hwy 101 Junction & El Camino Real	4	35	112,404	65	0	1.8%	0.7%	81.1	648	2,050	6,482	20,497	50
Between El Camino Real & Alameda de las Pulgas	4	1	95,627	65	0	1.8%	0.7%	79.2	418	1,321	4,179	13,214	50
Between Alameda de las Pulgas & Hillsdale Blvd	4	1	79,482	65	0	1.8%	0.7%	78.4	347	1,098	3,473	10,983	50
Between Hillsdale Blvd & City Limits	4	1	69,948	65	0	1.8%	0.7%	77.9	306	967	3,057	9,666	50

<b>1st Avenue</b>													
East of B Street	2	0	2,815	35	0	1.8%	0.7%	57.2	-	-	-	82	50
West of B Street	2	0	1,890	35	0	1.8%	0.7%	55.4	-	-	-	55	50
<b>2nd Avenue</b>													
East of B Street	2	0	3,525	35	0	1.8%	0.7%	58.1	-	-	33	103	50
Between B Street & Ellsworth Ave	2	0	3,625	35	0	1.8%	0.7%	58.3	-	-	33	106	50
Between Ellsworth Ave & San Mateo Dr	2	0	4,923	35	0	1.8%	0.7%	59.6	-	-	45	144	50
Between San Mateo Dr & El Camino Real	2	0	7,698	35	0	1.8%	0.7%	61.5	-	-	71	225	50
<b>3rd Avenue</b>													
East of Humboldt St	2	0	18,685	35	0	1.8%	0.7%	65.4	-	55	172	545	50
Between Humboldt St & Delaware St	2	0	8,978	35	0	1.8%	0.7%	62.2	-	-	83	262	50
Between Delaware St & B Street	2	0	5,970	35	0	1.8%	0.7%	60.4	-	-	55	174	50
Between B Street & Ellsworth Ave	2	0	4,650	35	0	1.8%	0.7%	59.3	-	-	43	136	50
Between Ellsworth Ave & San Mateo Dr	2	0	4,895	35	0	1.8%	0.7%	59.6	-	-	45	143	50
Between San Mateo Dr & El Camino Real	2	0	5,353	35	0	1.8%	0.7%	59.9	-	-	49	156	50
<b>4th Avenue</b>													
East of Humboldt St	2	0	20,565	35	0	1.8%	0.7%	65.8	-	60	190	600	50
Between Humboldt St & Delaware St	2	0	12,408	35	0	1.8%	0.7%	63.6	-	36	115	362	50
Between Delaware St & B Street	2	0	7,348	35	0	1.8%	0.7%	61.3	-	-	68	214	50
Between B Street & San Mateo Dr	2	0	6,458	35	0	1.8%	0.7%	60.8	-	-	60	188	50
Between San Mateo Dr & El Camino Real	2	0	5,948	35	0	1.8%	0.7%	60.4	-	-	55	174	50
<b>5th Avenue</b>													
East of Delaware St	2	0	4,195	35	0	1.8%	0.7%	58.9	-	-	39	122	50
Between Delaware St & B Street	2	0	6,380	35	0	1.8%	0.7%	60.7	-	-	59	186	50
Between B Street & San Mateo Dr	2	0	7,018	35	0	1.8%	0.7%	61.1	-	-	65	205	50
Between San Mateo Dr & El Camino Real	2	0	7,115	35	0	1.8%	0.7%	61.2	-	-	66	208	50
<b>9th Avenue</b>													
East of Delaware St	2	0	4,665	35	0	1.8%	0.7%	59.4	-	-	43	136	50
Between Delaware St & B Street	2	0	7,923	35	0	1.8%	0.7%	61.7	-	-	73	231	50
Between B Street & El Camino	2	0	5,860	35	0	1.8%	0.7%	60.3	-	-	54	171	50
<b>31st Avenue</b>													
Between Delaware St & El Camino Real	2	0	5,698	30	0	1.8%	0.7%	59.2	-	-	42	133	50
West of El Camino Real	2	0	8,600	35	0	1.8%	0.7%	62.0	-	-	79	251	50
<b>42nd Avenue</b>													
West of El Camino Real	2	0	4,750	35	0	1.8%	0.7%	59.4	-	-	44	139	50
<b>Alameda De Las Pulga</b>													
Between Crystal Springs Rd & 20th Ave	4	6	19,180	40	0	1.8%	0.7%	67.2	-	83	262	828	50
Between 20th Ave & Hillsdale Blvd	4	6	11,735	40	0	1.8%	0.7%	65.1	-	51	160	506	50

<b>Concar Drive</b>													
East of Grant St	2	0	6,390	40	0	1.8%	0.7%	62.0	-	-	80	252	50
Between Grant St & Delaware St	4	0	10,175	40	0	1.8%	0.7%	64.3	-	-	135	427	50
Between Delaware St & SR 92 Ramps	4	0	14,735	40	0	1.8%	0.7%	65.9	-	62	196	619	50
West of SR 92 Ramps	2	0	2,115	40	0	1.8%	0.7%	57.2	-	-	-	83	50
<b>Crystal Springs Road</b>													
West of El Camino Real	2	0	5,920	35	0	1.8%	0.7%	60.4	-	-	55	173	50
<b>B Street</b>													
North of 1st Ave	2	0	4,285	35	0	1.8%	0.7%	59.0	-	-	40	125	50
Between 1st Ave & 2nd Ave	2	0	4,123	35	0	1.8%	0.7%	58.8	-	-	38	120	50
Between 2nd Ave & 3rd Ave	2	0	4,070	35	0	1.8%	0.7%	58.8	-	-	38	119	50
Between 3rd Ave & 4th Ave	2	0	3,948	35	0	1.8%	0.7%	58.6	-	-	36	115	50
Between 4th Ave & 5th Ave	2	0	3,275	35	0	1.8%	0.7%	57.8	-	-	-	96	50
Between 5th Ave & 9th Ave	2	0	4,228	35	0	1.8%	0.7%	58.9	-	-	39	123	50
South of 9th Ave	2	0	5,100	35	0	1.8%	0.7%	59.7	-	-	47	149	50
<b>Baldwin Avenue</b>													
East of El Camino Real	2	0	5,070	35	0	1.8%	0.7%	59.7	-	-	47	148	50
West of El Camino Real	2	0	3,730	35	0	1.8%	0.7%	58.4	-	-	34	109	50
<b>Delaware Street</b>													
Between Peninsula Ave & Poplar Ave	2	0	8,048	35	0	1.8%	0.7%	61.7	-	-	74	235	50
Between Poplar Ave & 3rd Ave	2	0	8,663	35	0	1.8%	0.7%	62.0	-	-	80	253	50
Between 3rd Ave & 4th Ave	2	0	11,430	35	0	1.8%	0.7%	63.2	-	33	106	334	50
Between 4th Ave & 5th Ave	2	0	9,210	35	0	1.8%	0.7%	62.3	-	-	85	269	50
Between 5th Ave & 9th Ave	2	0	7,535	35	0	1.8%	0.7%	61.4	-	-	70	220	50
Between 9th Ave & 16th Ave	2	0	7,935	35	0	1.8%	0.7%	61.7	-	-	73	232	50
Between 16th Ave & Concar Dr	2	0	15,040	40	0	1.8%	0.7%	65.7	-	59	188	593	50
Between Concar Dr & 19th Ave	4	0	15,903	40	0	1.8%	0.7%	66.3	-	67	211	668	50
Between 19th Ave & Saratoga Dr	4	0	15,398	40	0	1.8%	0.7%	66.1	-	65	204	646	50
Between Saratoga Dr & 25th Ave	2	0	12,693	35	0	1.8%	0.7%	63.7	-	37	117	370	50
Between 25th Ave & 28th Ave	4	0	5,950	40	0	1.8%	0.7%	62.0	-	-	79	250	50
Between 28th Ave & 31st Ave	2	0	5,188	35	0	1.8%	0.7%	59.8	-	-	48	151	50
South of 31st Ave	2	0	7,160	35	0	1.8%	0.7%	61.2	-	-	66	209	50
<b>El Camino Real</b>													
Between Peninsula Ave & Poplar Ave	4	0	23,985	45	0	1.8%	0.7%	69.2	-	133	419	1,327	50
Between Poplar Ave & Tilton Ave	4	0	27,448	45	0	1.8%	0.7%	69.8	48	152	480	1,518	50
Between Tilton Ave & Crystal Springs Rd	4	0	28,750	45	0	1.8%	0.7%	70.0	50	159	503	1,590	50

Between Crystal Springs Rd & 2nd Ave	4	0	26,540	45	0	1.8%	0.7%	69.7	46	147	464	1,468	50
Between 2nd Ave & 3rd Ave	6	6	31,933	45	0	1.8%	0.7%	71.4	69	219	694	2,194	50
Between 3rd Ave & 4th Ave	6	6	32,695	45	0	1.8%	0.7%	71.5	71	225	710	2,246	50
Between 4th Ave & Barneson Ave	6	6	33,883	45	0	1.8%	0.7%	71.7	74	233	736	2,328	50
Between Barneson Ave & 17th Ave	6	6	34,083	45	0	1.8%	0.7%	71.7	74	234	741	2,342	50
Between 17th Ave & 20th Ave	6	6	39,148	45	0	1.8%	0.7%	72.3	85	269	851	2,690	50
Between 20th Ave & 25th Ave	6	6	30,245	45	0	1.8%	0.7%	71.2	66	208	657	2,078	50
Between 25th Ave & 28th Ave	6	6	31,423	45	0	1.8%	0.7%	71.4	68	216	683	2,159	50
Between 28th Ave & 31st Ave	6	8	31,030	45	0	1.8%	0.7%	71.4	69	218	691	2,185	50
Between 31st Ave & Hillsdale Blvd Ramps	6	10	15,570	45	0	1.8%	0.7%	68.5	-	113	356	1,125	50
Between Hillsdale Blvd Ramps & 41st Ave	6	0	16,180	45	0	1.8%	0.7%	68.2	-	104	330	1,044	50
Between 41st Ave & 42nd Ave	6	0	26,178	45	0	1.8%	0.7%	70.3	-	169	534	1,689	50
<b>Ellsworth Avenue</b>													
North of 2nd Ave	2	0	5,055	35	0	1.8%	0.7%	59.7	-	-	47	148	50
Between 2nd Ave & 3rd Ave	2	0	3,783	35	0	1.8%	0.7%	58.4	-	-	35	110	50
South of 3rd Ave	2	0	3,025	35	0	1.8%	0.7%	57.5	-	-	-	88	50
<b>Fashion Island Boulevard/Bridgepointe Parkway</b>													
Between Chess Dr & Baker Way	4	6	11,320	30	0	1.8%	0.7%	62.6	-	-	91	289	50
Between Baker Way & Mariner's Island	6	6	14,590	35	0	1.8%	0.7%	65.5	-	-	178	563	50
Between Mariner's Island & Norfolk St	4	6	16,203	35	0	1.8%	0.7%	65.1	-	52	164	517	50
Between Norfolk St & Hwy 101 Ramps	2	6	18,260	35	0	1.8%	0.7%	65.3	-	54	170	538	50
<b>Franklin Parkway</b>													
Between Saratoga Dr & Delaware St	4	6	5,508	35	0	1.8%	0.7%	60.5	-	-	56	176	50
<b>Hillsdale Boulevard</b>													
East of Norfolk St	6	6	35,120	45	0	1.8%	0.7%	71.8	76	241	763	2,413	50
Between Norfolk St & Hwy 101 Ramps	6	0	41,595	35	0	1.8%	0.7%	69.8	-	151	477	1,507	50
Between 101 Ramps & Saratoga Dr	6	6	26,695	45	0	1.8%	0.7%	70.6	-	183	580	1,834	50
Between Saratoga Dr & El Camino Real	4	0	19,630	45	0	1.8%	0.7%	68.4	-	109	343	1,086	50
Between El Camino Real & Alameda de las Pulga	4	0	9,988	40	0	1.8%	0.7%	64.2	-	-	133	419	50
Between Alameda de las Pulga & Campus Dr	2	0	10,978	30	0	1.8%	0.7%	62.1	-	-	81	256	50
<b>Humboldt Street</b>													
Between Peninsula Ave & Poplar Ave	2	0	8,378	35	0	1.8%	0.7%	61.9	-	-	77	245	50
Between Poplar Ave & 3rd Ave	2	0	8,138	35	0	1.8%	0.7%	61.8	-	-	75	238	50
Between 3rd Ave & 4th Ave	2	0	6,698	35	0	1.8%	0.7%	60.9	-	-	62	196	50
South of 4th Ave	2	0	5,465	35	0	1.8%	0.7%	60.0	-	-	50	160	50

**Mariner's Island Boulevard**

Between 3rd Ave & Fashion Island Blvd	4	8	8,885	35	0	1.8%	0.7%	62.6	-	-	91	287	50
South of Fashion Island Blvd	4	8	18,335	35	0	1.8%	0.7%	65.7	-	59	187	592	50

**Norfolk Street**

North of 3rd Avenue	2	0	7,640	35	0	1.8%	0.7%	61.5	-	-	71	223	50
Between 3rd Ave & Kehoe Ave	2	0	10,615	35	0	1.8%	0.7%	62.9	-	-	98	310	50
Between Kehoe Ave & Fashion Island	2	0	10,250	35	0	1.8%	0.7%	62.8	-	-	95	299	50
Between Fashion Island & Hillsdale Blvd	4	0	9,773	35	0	1.8%	0.7%	62.8	-	-	96	304	50

**Peninsula Avenue**

Between Bayshore Blvd & Humboldt St	4	0	21,120	40	0	1.8%	0.7%	67.5	-	89	280	887	50
Between Humboldt St & Delaware St	3	0	15,928	35	0	1.8%	0.7%	64.8	-	48	150	475	50
Between Delaware St & San Mateo Dr	3	0	13,915	35	0	1.8%	0.7%	64.2	-	42	131	415	50
Between San Mateo Dr & El Camino Real	3	0	5,720	35	0	1.8%	0.7%	60.3	-	-	54	171	50

**Poplar Avenue**

Between Hwy 101 & Humboldt St	2	0	10,135	30	0	1.8%	0.7%	61.7	-	-	75	236	50
Between Humboldt St & Delaware St	2	0	7,823	30	0	1.8%	0.7%	60.6	-	-	58	182	50
Between Delaware St & San Mateo Dr	2	0	5,978	30	0	1.8%	0.7%	59.5	-	-	44	139	50
Between San Mateo Dr & El Camino Real	2	0	6,865	30	0	1.8%	0.7%	60.1	-	-	51	160	50

**San Mateo Drive**

Between Peninsula Ave & Poplar Ave	3	0	12,250	40	0	1.8%	0.7%	64.9	-	49	156	494	50
Between Poplar Ave & 2nd Ave	2	0	10,583	35	0	1.8%	0.7%	62.9	-	-	98	309	50
Between 2nd Ave & 3rd Ave	2	0	5,273	35	0	1.8%	0.7%	59.9	-	-	49	154	50
Between 3rd Ave & 4th Ave	2	0	4,700	35	0	1.8%	0.7%	59.4	-	-	43	137	50
Between 4th Ave & 5th Ave	2	0	3,693	35	0	1.8%	0.7%	58.3	-	-	34	108	50

**Saratoga Drive**

Between Delaware St & Franklin Pkwy	4	6	9,315	40	0	1.8%	0.7%	64.1	-	-	127	402	50
Between Franklin Pkwy & Hillsdale Blvd	4	8	12,065	35	0	1.8%	0.7%	63.9	-	-	123	389	50
Between Hillsdale Blvd & Santa Clara Way	4	6	7,140	30	0	1.8%	0.7%	60.6	-	-	58	182	50

**Tilton Avenue**

East of El Camino Real	2	0	4,650	35	0	1.8%	0.7%	59.3	-	-	43	136	50
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## TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: **2023-039.01**

Project Name: **City of San Mateo 2040 General Plan**

### Background Information

**Model Description:** FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.

**Source of Traffic Volumes:** Kittleson Transportation Consultants

**Community Noise Descriptor:** L :       x       CNEL:             
dn

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Existing + General Plan Conditions Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway					Calc Dist
						Medium Trucks	Heavy Trucks	Ldn at 50 Feet	70 Ldn	Distance to Contour			
										65 Ldn	60 Ldn	55 Ldn	
Highway 101													
All of San Mateo	8	1.5	250,873	65	0	1.8%	0.7%	85.9	1,967	6,220	19,671	62,204	50
Interstate 280													
All of San Mateo	6	35	93,000	70	0	1.8%	0.7%	84.7	1,470	4,648	14,699	46,481	50
State Route 92													
Between City Limits & Mariners Island Blvd	6	1.5	140,538	65	0	1.8%	0.7%	81.6	724	2,289	7,238	22,888	50
Between Mariners Island Blvd & Hwy 101 Junction	6	30	186,526	65	0	1.8%	0.7%	85.4	1,740	5,503	17,403	55,034	50
Between Hwy 101 Junction & El Camino Real	4	35	131,676	65	0	1.8%	0.7%	81.8	759	2,401	7,593	24,011	50
Between El Camino Real & Alameda de las Pulgas	4	1	121,682	65	0	1.8%	0.7%	80.3	532	1,681	5,317	16,815	50
Between Alameda de las Pulgas & Hillsdale Blvd	4	1	106,559	65	0	1.8%	0.7%	79.7	466	1,473	4,657	14,725	50
Between Hillsdale Blvd & City Limits	4	1	94,979	65	0	1.8%	0.7%	79.2	415	1,312	4,150	13,125	50



<b>1st Avenue</b>													
East of B Street	2	0	7,100	35	0	1.8%	0.7%	61.2	-	-	66	207	50
West of B Street	2	0	7,110	35	0	1.8%	0.7%	61.2	-	-	66	208	50
<b>2nd Avenue</b>													
East of B Street	2	0	7,150	35	0	1.8%	0.7%	61.2	-	-	66	209	50
Between B Street & Ellsworth Ave	2	0	5,390	35	0	1.8%	0.7%	60.0	-	-	50	157	50
Between Ellsworth Ave & San Mateo Dr	2	0	6,150	35	0	1.8%	0.7%	60.6	-	-	57	180	50
Between San Mateo Dr & El Camino Real	2	0	8,783	35	0	1.8%	0.7%	62.1	-	-	81	256	50
<b>3rd Avenue</b>													
East of Humboldt St	2	0	20,650	35	0	1.8%	0.7%	65.8	-	60	191	603	50
Between Humboldt St & Delaware St	2	0	10,276	35	0	1.8%	0.7%	62.8	-	-	95	300	50
Between Delaware St & B Street	2	0	10,585	35	0	1.8%	0.7%	62.9	-	-	98	309	50
Between B Street & Ellsworth Ave	2	0	8,035	35	0	1.8%	0.7%	61.7	-	-	74	235	50
Between Ellsworth Ave & San Mateo Dr	2	0	8,515	35	0	1.8%	0.7%	62.0	-	-	79	249	50
Between San Mateo Dr & El Camino Real	2	0	8,630	35	0	1.8%	0.7%	62.0	-	-	80	252	50
<b>4th Avenue</b>													
East of Humboldt St	2	0	21,960	35	0	1.8%	0.7%	66.1	-	64	203	641	50
Between Humboldt St & Delaware St	2	0	12,658	35	0	1.8%	0.7%	63.7	-	37	117	369	50
Between Delaware St & B Street	2	0	11,555	35	0	1.8%	0.7%	63.3	-	34	107	337	50
Between B Street & San Mateo Dr	2	0	12,570	35	0	1.8%	0.7%	63.7	-	37	116	367	50
Between San Mateo Dr & El Camino Real	2	0	13,915	35	0	1.8%	0.7%	64.1	-	41	128	406	50
<b>5th Avenue</b>													
East of Delaware St	2	0	10,210	35	0	1.8%	0.7%	62.8	-	-	94	298	50
Between Delaware St & B Street	2	0	9,653	35	0	1.8%	0.7%	62.5	-	-	89	282	50
Between B Street & San Mateo Dr	2	0	11,048	35	0	1.8%	0.7%	63.1	-	32	102	322	50
Between San Mateo Dr & El Camino Real	2	0	8,775	35	0	1.8%	0.7%	62.1	-	-	81	256	50
<b>9th Avenue</b>													
East of Delaware St	2	0	9,260	35	0	1.8%	0.7%	62.3	-	-	85	270	50
Between Delaware St & B Street	2	0	10,143	35	0	1.8%	0.7%	62.7	-	-	94	296	50
Between B Street & El Camino Real	2	0	8,200	35	0	1.8%	0.7%	61.8	-	-	76	239	50
<b>31st Avenue</b>													
Between Delaware St & El Camino Real	2	0	10,258	30	0	1.8%	0.7%	61.8	-	-	76	239	50
West of El Camino Real	2	0	10,240	35	0	1.8%	0.7%	62.8	-	-	95	299	50
<b>42nd Avenue</b>													
West of El Camino Real	2	0	7,740	35	0	1.8%	0.7%	61.5	-	-	71	226	50
<b>Alameda De Las Pulga</b>													
Between Crystal Springs Rd & 20th Ave	4	6	23,175	40	0	1.8%	0.7%	68.0	-	100	316	1,000	50
Between 20th Ave & Hillsdale Blvd	4	6	16,505	40	0	1.8%	0.7%	66.5	-	71	225	712	50

**Concar Drive**

East of Grant St	2	0	10,180	40	0	1.8%	0.7%	64.0	-	40	127	402	50
Between Grant St & Delaware St	4	0	12,860	40	0	1.8%	0.7%	65.3	-	54	171	540	50
Between Delaware St & SR 92 Ramps	4	0	15,175	40	0	1.8%	0.7%	66.1	-	64	201	637	50
West of SR 92 Ramps	2	0	5,050	40	0	1.8%	0.7%	61.0	-	-	63	199	50

**Crystal Springs Road**

West of El Camino Real	2	0	11,740	35	0	1.8%	0.7%	63.4	-	34	108	343	50
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**B Street**

North of 1st Ave	2	0	8,005	35	0	1.8%	0.7%	61.7	-	-	74	234	50
Between 1st Ave & 2nd Ave	2	0	8,838	35	0	1.8%	0.7%	62.1	-	-	82	258	50
Between 2nd Ave & 3rd Ave	2	0	7,625	35	0	1.8%	0.7%	61.5	-	-	70	223	50
Between 3rd Ave & 4th Ave	2	0	6,835	35	0	1.8%	0.7%	61.0	-	-	63	200	50
Between 4th Ave & 5th Ave	2	0	6,243	35	0	1.8%	0.7%	60.6	-	-	58	182	50
Between 5th Ave & 9th Ave	2	0	8,948	35	0	1.8%	0.7%	62.2	-	-	83	261	50
South of 9th Ave	2	0	10,465	35	0	1.8%	0.7%	62.9	-	-	97	305	50

**Baldwin Avenue**

East of El Camino Real	2	0	10,740	35	0	1.8%	0.7%	63.0	-	-	99	313	50
West of El Camino Real	2	0	3,895	35	0	1.8%	0.7%	58.6	-	-	36	114	50

**Delaware Street**

Between Peninsula Ave & Poplar Ave	2	0	11,208	35	0	1.8%	0.7%	63.2	-	33	103	327	50
Between Poplar Ave & 3rd Ave	2	0	10,130	35	0	1.8%	0.7%	62.7	-	-	94	296	50
Between 3rd Ave & 4th Ave	2	0	12,075	35	0	1.8%	0.7%	63.5	-	35	111	352	50
Between 4th Ave & 5th Ave	2	0	10,548	35	0	1.8%	0.7%	62.9	-	-	97	308	50
Between 5th Ave & 9th Ave	2	0	8,305	35	0	1.8%	0.7%	61.9	-	-	77	242	50
Between 9th Ave & 16th Ave	2	0	8,525	35	0	1.8%	0.7%	62.0	-	-	79	249	50
Between 16th Ave & Concar Dr	2	0	17,675	40	0	1.8%	0.7%	66.4	-	70	220	697	50
Between Concar Dr & 19th Ave	4	0	18,748	40	0	1.8%	0.7%	67.0	-	79	249	787	50
Between 19th Ave & Saratoga Dr	4	0	17,610	40	0	1.8%	0.7%	66.7	-	74	234	739	50
Between Saratoga Dr & 25th Ave	2	0	16,833	35	0	1.8%	0.7%	64.9	-	49	155	491	50
Between 25th Ave & 28th Ave	4	0	8,253	40	0	1.8%	0.7%	63.4	-	-	110	346	50
Between 28th Ave & 31st Ave	2	0	9,865	35	0	1.8%	0.7%	62.6	-	-	91	288	50
South of 31st Ave	2	0	9,075	35	0	1.8%	0.7%	62.2	-	-	84	265	50

**El Camino Real**

Between Peninsula Ave & Poplar Ave	4	0	33,258	45	0	1.8%	0.7%	70.7	58	184	582	1,839	50
Between Poplar Ave & Tilton Ave	4	0	32,358	45	0	1.8%	0.7%	70.5	57	179	566	1,790	50
Between Tilton Ave & Crystal Springs Rd	4	0	33,588	45	0	1.8%	0.7%	70.7	59	186	587	1,858	50

Between Crystal Springs Rd & 2nd Ave	4	0	29,163	45	0	1.8%	0.7%	70.1	51	161	510	1,613	50
Between 2nd Ave & 3rd Ave	6	6	34,553	45	0	1.8%	0.7%	71.8	75	237	751	2,374	50
Between 3rd Ave & 4th Ave	6	6	35,853	45	0	1.8%	0.7%	71.9	78	246	779	2,463	50
Between 4th Ave & Barneson Ave	6	6	36,473	45	0	1.8%	0.7%	72.0	79	251	792	2,506	50
Between Barneson Ave & 17th Ave	6	6	40,108	45	0	1.8%	0.7%	72.4	87	276	871	2,756	50
Between 17th Ave & 20th Ave	6	6	50,823	45	0	1.8%	0.7%	73.4	110	349	1,104	3,492	50
Between 20th Ave & 25th Ave	6	6	44,425	45	0	1.8%	0.7%	72.9	97	305	965	3,052	50
Between 25th Ave & 28th Ave	6	6	45,010	45	0	1.8%	0.7%	72.9	98	309	978	3,093	50
Between 28th Ave & 31st Ave	6	8	42,475	45	0	1.8%	0.7%	72.8	95	299	946	2,990	50
Between 31st Ave & Hillsdale Blvd Ramps	6	10	19,045	45	0	1.8%	0.7%	69.4	-	138	435	1,377	50
Between Hillsdale Blvd Ramps & 41st Ave	6	0	18,873	45	0	1.8%	0.7%	68.9	-	122	385	1,218	50
Between 41st Ave & 42nd Ave	6	0	30,428	45	0	1.8%	0.7%	70.9	62	196	621	1,963	50
<b>Ellsworth Avenue</b>													
North of 2nd Ave	2	0	10,280	35	0	1.8%	0.7%	62.8	-	-	95	300	50
Between 2nd Ave & 3rd Ave	2	0	8,343	35	0	1.8%	0.7%	61.9	-	-	77	244	50
South of 3rd Ave	2	0	6,985	35	0	1.8%	0.7%	61.1	-	-	64	204	50
<b>Fashion Island Boulevard/Bridgepointe Parkway</b>													
Between Chess Dr & Baker Way	4	6	14,165	30	0	1.8%	0.7%	63.6	-	-	114	361	50
Between Baker Way & Mariner's Island	6	6	22,023	35	0	1.8%	0.7%	67.3	-	85	269	850	50
Between Mariner's Island & Norfolk St	4	6	23,328	35	0	1.8%	0.7%	66.7	-	74	236	745	50
Between Norfolk St & Hwy 101 Ramps	2	6	21,120	35	0	1.8%	0.7%	65.9	-	62	197	622	50
<b>Franklin Parkway</b>													
Between Saratoga Dr & Delaware St	4	6	14,665	35	0	1.8%	0.7%	64.7	-	-	148	468	50
<b>Hillsdale Boulevard</b>													
East of Norfolk St	6	6	42,915	45	0	1.8%	0.7%	72.7	93	295	932	2,949	50
Between Norfolk St & Hwy 101 Ramps	6	0	46,988	35	0	1.8%	0.7%	70.3	-	170	538	1,703	50
Between 101 Ramps & Saratoga Dr	6	6	30,728	45	0	1.8%	0.7%	71.3	67	211	668	2,111	50
Between Saratoga Dr & El Camino Real	4	0	20,555	45	0	1.8%	0.7%	68.6	-	114	359	1,137	50
Between El Camino Real & Alameda de las Pulga	4	0	11,853	40	0	1.8%	0.7%	65.0	-	50	157	498	50
Between Alameda de las Pulga & Campus Dr	2	0	15,185	30	0	1.8%	0.7%	63.5	-	35	112	354	50
<b>Humboldt Street</b>													
Between Peninsula Ave & Poplar Ave	2	0	11,165	35	0	1.8%	0.7%	63.1	-	33	103	326	50
Between Poplar Ave & 3rd Ave	2	0	11,213	35	0	1.8%	0.7%	63.2	-	33	103	327	50
Between 3rd Ave & 4th Ave	2	0	7,640	35	0	1.8%	0.7%	61.5	-	-	71	223	50
South of 4th Ave	2	0	7,785	35	0	1.8%	0.7%	61.6	-	-	72	227	50

<b>Mariner's Island Boulevard</b>													
Between 3rd Ave & Fashion Island Blvd	4	8	14,380	35	0	1.8%	0.7%	64.7	-	-	147	464	50
South of Fashion Island Blvd	4	8	19,655	35	0	1.8%	0.7%	66.0	-	63	201	634	50
<b>Norfolk Street</b>													
North of 3rd Avenue	2	0	10,725	35	0	1.8%	0.7%	63.0	-	-	99	313	50
Between 3rd Ave & Kehoe Ave	2	0	14,303	35	0	1.8%	0.7%	64.2	-	42	132	417	50
Between Kehoe Ave & Fashion Island	2	0	14,243	35	0	1.8%	0.7%	64.2	-	42	131	416	50
Between Fashion Island & Hillsdale Blvd	4	0	11,950	35	0	1.8%	0.7%	63.7	-	-	117	371	50
<b>Peninsula Avenue</b>													
Between Bayshore Blvd & Humboldt St	4	0	24,820	40	0	1.8%	0.7%	68.2	-	104	330	1,042	50
Between Humboldt St & Delaware St	3	0	17,910	35	0	1.8%	0.7%	65.3	-	53	169	535	50
Between Delaware St & San Mateo Dr	3	0	14,708	35	0	1.8%	0.7%	64.4	-	44	139	439	50
Between San Mateo Dr & El Camino Real	3	0	6,853	35	0	1.8%	0.7%	61.1	-	-	65	205	50
<b>Poplar Avenue</b>													
Between Hwy 101 & Humboldt St	2	0	10,135	30	0	1.8%	0.7%	61.7	-	-	75	236	50
Between Humboldt St & Delaware St	2	0	8,003	30	0	1.8%	0.7%	60.7	-	-	59	187	50
Between Delaware St & San Mateo Dr	2	0	7,645	30	0	1.8%	0.7%	60.5	-	-	56	178	50
Between San Mateo Dr & El Camino Real	2	0	12,310	30	0	1.8%	0.7%	62.6	-	-	91	287	50
<b>San Mateo Drive</b>													
Between Peninsula Ave & Poplar Ave	3	0	12,308	40	0	1.8%	0.7%	65.0	-	50	157	497	50
Between Poplar Ave & 2nd Ave	2	0	12,330	35	0	1.8%	0.7%	63.6	-	36	114	360	50
Between 2nd Ave & 3rd Ave	2	0	9,348	35	0	1.8%	0.7%	62.4	-	-	86	273	50
Between 3rd Ave & 4th Ave	2	0	8,680	35	0	1.8%	0.7%	62.0	-	-	80	253	50
Between 4th Ave & 5th Ave	2	0	5,170	35	0	1.8%	0.7%	59.8	-	-	48	151	50
<b>Saratoga Drive</b>													
Between Delaware St & Franklin Pkwy	4	6	15,045	40	0	1.8%	0.7%	66.1	-	65	205	649	50
Between Franklin Pkwy & Hillsdale Blvd	4	8	18,053	35	0	1.8%	0.7%	65.7	-	58	184	583	50
Between Hillsdale Blvd & Santa Clara Way	4	6	7,680	30	0	1.8%	0.7%	60.9	-	-	62	196	50
<b>Tilton Avenue</b>													
East of El Camino Real	2	0	7,175	35	0	1.8%	0.7%	61.2	-	-	66	209	50

## A P P E N D I X E

### T R A N S P O R T A T I O N D A T A



## APPENDIX E1: VEHICLE MILES TRAVELED (VMT)





Table A: San Mateo General Plan - VMT and ADT Summary  
City of San Mateo General Plan

Region/ Scenario	Households	Population	Employment	Employed Residents	ADT/ TripGen	VMT_HH	VMT_EMP	Total VMT	VMT/Capita	VMT/Job	Difference to Existing VMT/Cap	Difference to Existing VMT/Emp	%Difference to Existing VMT/Cap	%Difference to Existing VMT/Emp
2020 Baseline														
City	41,057	107,774	62,439	59,793	414,402	1,721,158	1,026,899	4,049,429	16.0	16.4	-0.4	-0.9	-2%	-5%
San Mateo County	271,112	778,698	389,074	407,306	2,806,578	12,743,267	6,729,819	27,522,828	16.4	17.3				
Bay Area	2,766,416	7,736,524	3,854,089	3,909,153	25,029,400	125,903,138	65,943,226	358,936,547	16.3	17.1				
2040 PREFERRED														
City	61,139	159,117	79,353	85,944	541,077	2,328,406	1,213,574	5,420,137	14.6	15.3	-1.7	-2.0	-11%	-12%
San Mateo County	330,085	936,094	489,108	469,669	3,283,068	14,349,301	8,798,838	33,711,942	15.3	18.0				
Bay Area	3,430,821	9,669,255	4,728,260	4,713,728	29,414,319	157,406,464	81,873,205	456,858,804	16.3	17.3				

Source: San Mateo City Model, Kittelson & Assoc, Inc., 2023

Notes: The Region for VMT Impact comparison is defined as San Mateo County



## APPENDIX E2: AVERAGE DAILY TRAFFIC (ADT) VOLUMES



San Mateo GP Intersection Turning Volumes - ADT  
ADT - 2020 Counts

2020 Counts - ADT - 12 movement form

Intersection			Southbound			Westbound			Northbound			Eastbound			Sum
N/S Street	E/W Street		SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	
1	Mariners Island Blvd	3rd Ave	145	260	60	90	6590	380	220	200	3350	4575	7625	195	23690
2	Baker Way	Fashion Island Blvd	325	1250	70	65	2770	3180	455	270	2195	3910	4780	535	19805
3	Mariners Island Blvd	Fashion Island Blvd	1365	2760	555	185	3770	1495	4870	2880	2160	4170	3790	1040	29040
4	Norfolk St	3rd Ave	765	1495	1550	620	9440	685	780	1190	4840	5595	10150	2020	39130
5	Norfolk St	Fashion Island Blvd	4420	2180	2250	2390	4410	1060	1520	1815	2120	1620	4480	1565	29830
6	Norfolk St	Hillsdale Blvd	2770	1245	595	775	15455	810	825	1285	3305	2735	16660	2560	49020
7	Humboldt St	Peninsula Ave	115	1410	890	1435	7320	1895	2365	415	675	1400	7440	55	25415
8	Humboldt St	Poplar Ave	830	1935	2000	765	3550	825	160	2545	680	600	2835	520	17245
9	Humboldt St	3rd Ave	390	2660	0	5810	9435	3440	0	670	45	0	0	0	22450
10	Humboldt St	4th Ave	0	2090	3755	0	0	0	2760	515	0	100	14050	220	23490
11	Grant St	Concar Dr	445	1855	300	170	1605	1345	900	1350	2660	1645	2070	690	15035
12	US Highway 101 SB Ram	Fashion Island Blvd	1455	320	3550	0	4840	3460	0	0	0	1755	6055	0	21435
13	US Highway 101 NB Ram	Hillsdale Blvd	0	0	0	0	17630	0	11405	0	3985	0	10670	0	43690
14	US Highway 101 SB Ram	Hillsdale Blvd	0	3100	2275	0	12295	0	0	0	0	2490	11730	0	31890
15	Delaware St	Peninsula Ave	130	1090	495	280	5980	1060	2175	865	1465	1285	5875	115	20815
16	Delaware St	Poplar Ave	335	2185	990	1475	1825	1300	670	2960	465	155	370	210	12940
17	Delaware St	3rd Ave	205	4890	0	1020	4385	2680	0	3090	320	900	0	385	17875
18	Delaware St	4th Ave	670	4520	2555	0	0	0	1345	2945	315	195	6545	290	19380
19	Delaware St	5th Ave	1460	2825	95	370	1400	100	125	3750	390	405	2105	600	13625
20	Delaware St	9th Ave	760	2830	90	155	1580	395	305	3120	675	610	2140	520	13180
21	Delaware St	Concar Dr	1640	4255	1365	1250	3330	1460	1240	4490	1950	2980	2590	2040	28590
22	SR 92 WB Ramps	Concar Dr	0	0	0	0	355	6935	7380	0	515	975	270	0	16430
23	Grant St	19th Ave	0	1440	3125	3440	0	2160	2000	1410	0	340	2065	790	16770
24	Delaware St	19th Ave	0	4610	3810	0	0	0	3155	4655	0	1510	3480	2355	23575
25	Delaware St	Saratoga Dr	10	4155	3005	3720	0	1155	1380	5970	5	5	0	5	19410
26	Delaware St	25th Ave	4810	480	0	0	0	0	1075	750	1380	0	6350	0	14845
27	Saratoga Dr	Franklin Pkwy	380	2535	1265	1035	1365	2835	870	3560	1150	1465	1090	595	18145
28	Saratoga Dr	Hillsdale Blvd	2170	1375	2835	3625	6520	1580	2945	890	350	0	9370	820	32480
29	B St	1st Ave	150	1405	545	515	640	200	405	1610	320	210	510	60	6570
30	B St	2nd Ave	190	1360	195	345	1395	180	370	1690	375	325	1040	315	7780
31	B St	3rd Ave	270	1305	195	805	2715	915	210	985	170	290	905	280	9045
32	B St	4th Ave	780	1075	610	145	990	85	495	1120	155	335	4355	290	10435
33	B St	5th Ave	285	1055	155	205	2310	230	640	1315	350	545	2860	270	10220
34	Ellsworth Ave	2nd Ave	740	2060	200	425	1280	165	205	875	110	415	1335	755	8565
35	Ellsworth Ave	3rd Ave	355	1840	140	540	2395	150	100	585	65	285	1345	275	8075
36	San Mateo Dr	Peninsula Ave	370	4505	1790	2630	2815	900	2125	4155	100	250	2720	240	22600
37	San Mateo Dr	Poplar Ave	350	4465	970	585	2420	915	665	5610	280	440	3040	485	20225
38	San Mateo Dr	2nd Ave	1265	2500	460	620	1530	170	365	1735	130	485	2065	2210	13535
39	San Mateo Dr	3rd Ave	500	2315	290	435	2140	285	225	1205	140	550	1695	415	10195
40	San Mateo Dr	4th Ave	580	1480	920	240	1490	220	250	1045	70	430	2890	415	10030
41	San Mateo Dr	5th Ave	900	0	1180	915	2265	0	0	0	0	0	3055	895	9210
42	El Camino Real	Peninsula Ave	5	9265	735	565	625	1375	1575	8460	1610	790	70	30	25105
43	El Camino Real	Poplar Ave	80	11120	1130	715	540	1855	1615	11645	565	505	860	205	30835
44	El Camino Real	Tilton Ave	450	12140	260	395	790	1080	1170	13605	200	455	955	740	32240
45	El Camino Real	Crystal Springs Rd	1965	13015	0	0	0	0	0	11220	750	555	0	2650	30155
46	El Camino Real	2nd Ave	0	12165	775	1045	0	2300	3590	13555	0	0	0	0	33430
47	El Camino Real	3rd Ave	1060	14265	370	605	1045	1105	910	14430	895	1630	1230	1525	39070
48	El Camino Real	4th Ave	320	13660	1510	690	490	1070	1330	15390	310	350	930	585	36635
49	El Camino Real	Barneson Ave	1105	15055	0	0	0	0	0	17790	515	610	0	1705	36780
50	El Camino Real	17th Ave	480	14705	675	365	760	2155	2340	17225	2630	3045	905	745	46030
51	El Camino Real	20th Ave	2070	12900	1480	1305	645	675	230	14035	1100	1150	570	4405	40565
52	El Camino Real	25th Ave	530	12325	1685	1330	1295	3240	3635	12915	605	390	1670	1615	41235
53	El Camino Real	28th Ave	925	13220	255	45	0	15	10	13765	1280	1330	0	1525	32370
54	El Camino Real	31st Ave	1965	13755	940	4865	725	575	0	9145	815	1925	1400	1770	37880
55	El Camino Real NB	Hillsdale Blvd	0	0	0	3190	6560	0	3830	240	810	0	6450	1495	22575
56	El Camino Real SB	Hillsdale Blvd	1245	795	2320	0	4430	3045	0	0	0	1240	5675	0	18750
57	El Camino Real	41st Ave	815	13020	0	0	0	0	0	12170	180	545	0	1275	28005
58	El Camino Real	42nd Ave	620	10550	2460	2145	1320	1115	1525	9965	275	310	1525	700	32510
59	Pacific Blvd	42nd Ave	1455	2300	40	35	50	40	60	3820	3110	3560	45	1845	16360
60	Alameda De Las Pulga	20th Ave	480	6390	3925	1715	105	525	1050	6160	235	70	195	510	21360
61	Campus Dr	Hillsdale Blvd	2910	0	625	500	6785	0	0	0	0	0	7510	2635	20965
62	Bayshore Blvd	Peninsula Ave	0	0	0	0	7795	1300	1225	0	2390	2650	8060	0	23420
63	Airport Blvd	Peninsula Ave	9485	0	400	255	535	0	0	0	0	0	575	8775	20025
64	Airport Blvd	US Highway 101 NB Rd	340	3095	0	0	0	0	0	1350	7570	5730	0	1240	19325
65	Kehoe Avenue	S. Norfolk Street	445	2275	715	420	1275	440	150	1295	1045	675	1035	1495	11265
66	Hillsdale Boulevard	Alameda de las Pulga	285	3075	1050	580	1710	785	1060	3535	905	920	2200	515	16620
67	Delaware Street	28th Avenue	705	1705	545	1230	0	65	120	1620	750	795	0	2410	9945
68	Delaware Street	31st Avenue	720	1025	955	855	0	2830	330	1285	225	1465	0	480	10170
69	El Camino Real	Baldwin Avenue	325	13315	250	365	715	1130	1830	14340	215	285	780	410	33960
70	Polhemus Road	De Anza Boulevard	25	1590	1760	2080	190	1655	1690	2410	225	110	115	40	11890
71	Chess Dr	Bridgepointe Parkway	210	580	245	20	465	90	105	625	1660	1515	685	185	6385
72	S. B Street	9th Street	330	785	775	870	2300	995	1935	1200	90	95	2685	360	12420
73	W. Hillsdale Boulevard	Clearview Way	305	90	1285	1240	7785	765	795	100	40	50	4075	330	16860
Sum			63985	313295	72295	64505	199170	74875	88015	307140	67630	80110	216250	73580	1620850

Intersection		Southbound												Sum
N/S Street	E/W Street	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL	
1	Mariners Island Blvd 3rd Ave	95	310	55	95	9760	980	550	255	6105	6665	8390	125	33385
2	Baker Way	1540	2585	175	95	4170	2465	465	495	3490	4795	6795	1160	28230
3	Mariners Island Blvd Fashion Island Blvd	1940	3265	1160	685	6705	1975	4875	4050	1575	3915	6695	2795	39635
4	Norfolk St 3rd Ave	490	1930	2155	1675	12425	2250	2235	2720	5380	5900	10780	1755	49695
5	Norfolk St Fashion Island Blvd	5190	2930	4515	4180	4850	1375	2390	2755	2020	1420	5720	1920	39265
6	Norfolk St Hillsdale Blvd	2780	1390	935	1400	18710	1105	1055	1590	2805	2315	19710	2915	56710
7	Humboldt St Peninsula Ave	290	2740	1310	2520	6735	1425	2460	1430	1165	2095	7980	185	30335
8	Humboldt St Poplar Ave	860	3300	2010	665	3235	1230	215	3640	955	935	2780	540	20365
9	Humboldt St 3rd Ave	760	3935	0	6795	10720	3135	0	660	40	0	0	0	26045
10	Humboldt St 4th Ave	0	3315	3475	0	0	0	3745	545	0	180	14740	175	26175
11	Grant St Concar Dr	610	2690	755	390	2275	2220	1265	2340	2340	1700	3275	1280	21140
12	US Highway 101 SB Ram Fashion Island Blvd	1765	285	3940	0	6045	3425	0	0	0	1845	6510	0	23815
13	US Highway 101 NB Ram Hillsdale Blvd	0	0	0	0	19590	0	11310	0	4005	0	13840	0	48745
14	US Highway 101 SB Ram Hillsdale Blvd	0	4315	4425	0	14200	0	0	0	0	2240	13970	0	39150
15	Delaware St Peninsula Ave	315	2935	1175	700	5745	1020	2180	2505	1625	1620	6550	320	26690
16	Delaware St Poplar Ave	495	3210	1065	1470	1895	1195	625	3855	580	300	450	435	15575
17	Delaware St 3rd Ave	535	5065	0	750	6500	2365	0	2980	595	2080	0	1165	22035
18	Delaware St 4th Ave	1925	5195	2115	0	0	0	740	2760	1205	730	8330	625	23625
19	Delaware St 5th Ave	1610	3210	965	840	3220	255	790	3660	405	155	4140	180	19430
20	Delaware St 9th Ave	745	2825	350	515	3135	860	810	3345	420	265	3590	355	17215
21	Delaware St Concar Dr	1555	5140	2075	1515	3370	2090	1940	5290	1885	2865	3250	2100	33075
22	SR 92 WB Ramps Concar Dr	545	1680	60	760	870	6935	7735	2320	1510	1005	235	885	24540
23	Grant St 19th Ave	0	2085	3620	4085	0	2765	2150	1505	0	330	2005	750	19295
24	Delaware St 19th Ave	0	5465	4540	0	0	0	3145	5290	0	1490	3285	2990	26205
25	Delaware St Saratoga Dr	10	6400	3815	3745	0	1755	2055	6435	0	5	0	5	24225
26	Delaware St 25th Ave	6825	1475	0	0	0	0	0	2005	825	1605	0	6710	19445
27	Saratoga Dr Franklin Pkwy	1140	3730	2325	745	2520	2460	1465	4270	3135	3370	3575	1230	29965
28	Saratoga Dr Hillsdale Blvd	2805	1565	4605	6240	6290	1365	3035	1260	270	185	10160	1200	38980
29	B St 1st Ave	460	2570	765	955	2165	355	765	3040	1220	955	2095	215	15560
30	B St 2nd Ave	455	2515	800	1140	2275	470	800	3505	360	295	1665	355	14635
31	B St 3rd Ave	630	1810	645	1625	3510	910	740	2100	465	340	2510	495	15780
32	B St 4th Ave	970	1750	320	400	2810	330	660	2360	420	855	5775	860	17510
33	B St 5th Ave	975	2255	150	190	4255	270	675	2765	1245	1655	4055	675	19165
34	Ellsworth Ave 2nd Ave	1120	4040	445	830	1625	500	575	2760	235	410	1400	1085	15025
35	Ellsworth Ave 3rd Ave	705	3500	350	810	3535	225	400	2160	235	465	2800	640	15825
36	San Mateo Dr Peninsula Ave	530	4780	1855	2510	3140	730	1875	4360	115	300	3130	320	23645
37	San Mateo Dr Poplar Ave	700	4670	555	275	4240	800	690	5555	995	1150	4575	700	24905
38	San Mateo Dr 2nd Ave	1110	3670	310	600	2150	490	740	3220	350	1165	2135	1890	17830
39	San Mateo Dr 3rd Ave	895	3515	600	585	3435	415	745	2940	395	690	2870	525	17610
40	San Mateo Dr 4th Ave	1410	1655	1435	720	4305	300	290	1960	115	630	5900	1480	20200
41	San Mateo Dr 5th Ave	1120	0	1425	1500	2835	0	0	0	0	0	3475	1345	11700
42	El Camino Real Peninsula Ave	60	12125	680	840	575	1815	2170	11930	3020	1455	90	40	34800
43	El Camino Real Poplar Ave	205	12490	3235	2395	1455	1875	1250	14535	535	350	1550	640	40515
44	El Camino Real Tilton Ave	575	13935	525	1110	1075	1340	1565	16320	130	290	1310	965	39140
45	El Camino Real Crystal Springs Rd	4080	13630	0	0	0	0	0	11815	1335	1135	0	4440	36435
46	El Camino Real 2nd Ave	0	13145	1000	1320	0	2565	3880	14695	0	0	0	0	36605
47	El Camino Real 3rd Ave	1690	14480	435	870	2150	1600	1155	15165	1570	2465	2240	2180	46000
48	El Camino Real 4th Ave	680	13080	2785	1885	2110	1825	2145	16335	435	405	2360	945	44990
49	El Camino Real Barneson Ave	1520	16750	0	0	0	0	0	18840	1305	1695	0	2500	42610
50	El Camino Real 17th Ave	835	17615	1050	610	1650	3260	3210	20360	3940	4290	1660	1155	59635
51	El Camino Real 20th Ave	2150	18245	2165	1570	935	1400	650	19740	2050	2325	1220	5100	57550
52	El Camino Real 25th Ave	865	18860	1915	1820	1705	4200	3435	18580	745	575	1650	2400	56750
53	El Camino Real 28th Ave	925	19535	2580	2165	3310	830	1360	18260	1280	1330	2955	1655	56185
54	El Camino Real 31st Ave	3095	18425	2530	5645	400	310	0	12145	585	1375	2135	2650	49295
55	El Camino Real NB Hillsdale Blvd	0	0	0	2890	7145	0	3660	280	1220	0	7155	2080	24430
56	El Camino Real SB Hillsdale Blvd	1460	795	2025	0	5435	3135	0	0	0	1765	7295	0	21910
57	El Camino Real 41st Ave	2130	15995	0	0	0	0	0	12465	520	1155	0	1460	33725
58	El Camino Real 42nd Ave	1560	12985	2620	1740	2450	1015	1570	10955	625	440	1805	860	38625
59	Pacific Blvd 42nd Ave	1580	2970	65	55	80	85	120	4195	3565	4200	55	1720	18690
60	Alameda De Las Pulga 20th Ave	410	8650	4410	1920	130	1000	1800	7330	325	110	255	455	26795
61	Campus Dr Hillsdale Blvd	5345	0	2555	2495	7115	0	0	0	0	0	7260	4800	29570
62	Bayshore Blvd Peninsula Ave	0	0	0	0	11435	865	1195	0	3505	3710	8560	0	29270
63	Airport Blvd Peninsula Ave	11870	0	410	230	555	0	0	0	0	0	555	9245	22865
64	Airport Blvd US Highway 101 NB Rd	1360	5870	0	0	0	0	0	1805	7605	6055	0	3355	26050
65	Kehoe Avenue S. Norfolk Street	420	2375	1540	580	1560	545	450	1765	1205	655	2190	1510	14795
66	Hillsdale Boulevard Alameda de las Pulga	590	4005	1635	830	1640	580	875	4935	855	850	2190	1050	20035
67	Delaware Street 28th Avenue	1015	3195	440	815	2975	95	180	2225	1805	1880	2900	2405	19930
68	Delaware Street 31st Avenue	1090	1875	2295	1545	3205	2760	485	2310	220	925	3570	485	20765
69	El Camino Real Baldwin Avenue	315	14475	745	1385	1480	2105	3050	16200	125	195	1305	475	41855
70	Polhemus Road De Anza Boulevard	15	2670	2390	3450	180	2800	2420	4200	225	115	100	40	18605
71	Chess Dr Bridgepointe Parkway	395	2205	610	360	1085	670	540	3125	1145	1430	810	475	12850
72	S. B Street 9th Street	870	2550	810	875	2920	1630	2510	3160	285	330	3030	765	19735
73	W. Hillsdale Boulevard Clearview Way	480	65	1535	1145	16930	900	1055	80	75	170	12365	850	35650
		93490	402695	104260	92550	274930	89650	106920	388435	88720	100595	287710	99085	2129040



## A P P E N D I X F

### H A Z A R D O U S M A T E R I A L S S I T E S



## APPENDIX F - HAZARDOUS MATERIALS SITES

### GEOTRACKER

SITE NAME	SITE_TYPE	STATUS	ADDRESS	CITY
704 NORTH SAN MATEO DRIVE	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	704 NORTH SAN MATEO DRIVE	SAN MATEO
911 NORTH AMPHLETT	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	911 NORTH AMPHLETT BOULEVARD	SAN MATEO
922-980 SOUTH CLAREMONT	CLEANUP PROGRAM SITE	OPEN - LONG TERM MANAGEMENT	922-980 SOUTH CLAREMONT	SAN MATEO
A & A BEACON	LUST CLEANUP SITE	COMPLETED - CASE CLOSED - LAND USE RESTRICTIONS	221 SOUTH EL CAMINO REAL	SAN MATEO
A-1 RENTAL CENTER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	333 NORTH AMPHLETT BOULEVARD	SAN MATEO
ABC BODY SHOP	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4007 PACIFIC BOULEVARD	SAN MATEO
ACCU-TUNE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	435 EAST 3RD AVENUE	SAN MATEO
ACE ROOFING COMPANY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1154 EAST 19TH AVENUE	SAN MATEO
AH SAM	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2645 SOUTH EL CAMINO REAL	SAN MATEO
AMERICAN PRESIDENT SYSTEMS,LTD	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3 WATERS PARK	SAN MATEO
ARAGON HIGH SCHOOL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	900 ALAMEDA DE LAS PULGAS	SAN MATEO
ARCO #0515	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	300 SOUTH DELAWARE STREET	SAN MATEO
ARCO #313-D	LUST CLEANUP SITE	OPEN - ELIGIBLE FOR CLOSURE	1643 EL CAMINO REAL	SAN MATEO
ARCO #4495	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1950 SOUTH DELAWARE STREET	SAN MATEO
ARCO #479	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	335 SOUTH NORFOLK STREET	SAN MATEO
ARCO #725	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	402 NORTH EL CAMINO REAL	SAN MATEO
ARNOLD PEDERSON LUMBER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	400 SOUTH CLAREMONT STREET	SAN MATEO
AUTO TUNE & BRAKE CENTER	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3925 SOUTH EL CAMINO REAL	SAN MATEO
BAY AREA SELF STORAGE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1140-1150 EAST 19TH AVENUE	SAN MATEO
BAYSHORE INTERNAT'NL TRUCK	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	35 NORTH AMPHLETT BOULEVARD	SAN MATEO
BAYSIDE BUILDING MATERIALS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2075 SOUTH NORFOLK STREET	SAN MATEO
BELLA MANGIATA RESTAURANT	LUST CLEANUP SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	233 BALDWIN	SAN MATEO
BLU-WHITE LAUNDRY	CLEANUP PROGRAM SITE	OPEN - REMEDIATION	80 NORTH B STREET	SAN MATEO
BLUE BIRD CLEANERS	CLEANUP PROGRAM SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	60 WEST 42ND AVENUE	SAN MATEO
BOB RANDICK CO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1740 LESLIE	SAN MATEO
BOB REEDS SERVICE STATION	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1641 PALM	SAN MATEO
BOREL SQUARE CLEANERS	CLEANUP PROGRAM SITE	OPEN - VERIFICATION MONITORING - LAND USE RESTRICTIONS	67 BOVET ROAD	SAN MATEO
BP #11205	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	609 EAST 4TH AVENUE	SAN MATEO
BUD'S TIRE SERVICE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	836 NORTH SAN MATEO	SAN MATEO
C & P SERVICE, INC.	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2777 SOUTH EL CAMINO REAL	SAN MATEO
CALIFORNIA MILITARY DEPT	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	400 NORTH HUMBOLDT STREET	SAN MATEO
CALIFORNIA WATER SERVICES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	0 BROADVIEW	SAN MATEO
CALTRAIN CORRIDOR - CALTRAIN N&S CTX CONSTRUCTION	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	CALTRAIN CORRIDOR (SF TO SANTA CLARA)	SAN MATEO
CALTRANS PUMP STATION	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	0 HIGHWAY 280/92 INTERCHANGE	SAN MATEO
CARL'S DRY CLEANERS	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	801 SOUTH B STREET	SAN MATEO
CARSTENS REALTY INC	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	49 WEST 42ND AVENUE	SAN MATEO
CENTRAL PARK SOUTH APARTMENTS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	31 9TH AVENUE	SAN MATEO
CHEVRON 8-4772	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1966 COYOTE POINT	SAN MATEO
CHEVRON 9-0056	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	610 NORTH EL CAMINO REAL	SAN MATEO
CHEVRON 9-0312	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2 EAST 3RD AVENUE	SAN MATEO
CHEVRON 9-2038	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	790 POLHEMUS	SAN MATEO
CHEVRON 9-3989	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	880 NORTH DELAWARE STREET	SAN MATEO
CHEVRON 9-4224	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2950 SOUTH EL CAMINO REAL	SAN MATEO
CHEVRON 9-5336	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	602 EAST 4TH AVENUE	SAN MATEO
CHEVRON 9-5716, FORMER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1350 WEST HILLSDALE BOULEVARD	SAN MATEO
CHEVRON 9-7781	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	300 EAST HILLSDALE BOULEVARD	SAN MATEO
CHEVRON 9-7863	LUST CLEANUP SITE	OPEN - VERIFICATION MONITORING	2009 SOUTH EL CAMINO REAL	SAN MATEO
CHIN'S SERVICE STATION	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2300 SOUTH EL CAMINO REAL	SAN MATEO

CITY OF SAN MATEO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	24TH & EL CAMINO REAL	SAN MATEO
CITY OF SAN MATEO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	901 EAST 3RD AVENUE	SAN MATEO
CITY OF SAN MATEO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	0 3RD AVE & HUMBOLDT	SAN MATEO
CITY OF SAN MATEO - PUMP STN	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1025 PATRICIA	SAN MATEO
CITY OF SAN MATEO CORP YARD	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1949 PACIFIC	SAN MATEO
CITY OF SAN MATEO,FIRE STA.#21	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	120 SOUTH ELLSWORTH AVENUE	SAN MATEO
COAST GAS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	254 EAST HILLSDALE BOULEVARD	SAN MATEO
COLLEGE OF SAN MATEO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1700 WEST HILLSDALE BOULEVARD	SAN MATEO
COLLEGE PLAZA SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1400 WEST HILLSDALE BLVD	SAN MATEO
COOKE PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2130 SOUTH EL CAMINO REAL	SAN MATEO
CRAY CLEANERS	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	33 WEST 37TH AVENUE	SAN MATEO
DEIHL'S EQUIPMENT	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	143 SOUTH	SAN MATEO
DELAWARE SHELL SERVICE	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1790 SOUTH DELAWARE STREET	SAN MATEO
DEWALD RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	430 WEST POPLAR	SAN MATEO
DRAEGERS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	200-222 EAST 4TH AVENUE	SAN MATEO
DRAPER RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	439 GEORGETOWN AVENUE	SAN MATEO
DUC HAN INC	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	610 OCCIDENTAL	SAN MATEO
DUCASSEE PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	354 PARROT DR	SAN MATEO
DUNFEY HOTEL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1770 SOUTH AMPHLETT BOULEVARD	SAN MATEO
EXXON 7-4135 (FORMER)	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1801 SOUTH DELAWARE STREET	SAN MATEO
EXXON BULK FAC, FORMER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	320 PENINSULA	SAN MATEO
FASHION ISLAND SHOPPING CTR	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	0 FASHION ISLAND	SAN MATEO
FIRESTONE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2180 SOUTH EL CAMINO REAL	SAN MATEO
FIRESTONE	CLEANUP PROGRAM SITE	OPEN - ELIGIBLE FOR CLOSURE	2180 S. EL CAMINO REAL	SAN MATEO
FORMER BAYSHORE EQUIPMENT RENTAL	CLEANUP PROGRAM SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	909 NORTH AMPHLETT BOULEVARD	SAN MATEO
FORMER SHEN LINCOLN-MERCURY	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	888 NORTH SAN MATEO DRIVE	SAN MATEO
G & C AUTO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1753 LESLIE	SAN MATEO
GENERAL HOSPITAL / CHOPE HOSP	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	222 39TH	SAN MATEO
GIOTINIS PROPERTY	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	1218 MONTE DIABLO AVENUE	SAN MATEO
GOLDEN GATE FLOWER GROWERS	LUST CLEANUP SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	1000 SOUTH AMPHLETT BOULEVARD	SAN MATEO
GOOD YEAR TIRE STORE, FORMER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	616 SOUTH B STREET	SAN MATEO
H.E. UNDERWOOD WAREHOUSE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	78 EAST 21ST AVENUE	SAN MATEO
HAMBLIN TRUST	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1065 AMPHLETT BOULEVARD	SAN MATEO
HAYWARD PARK CALTRAIN STATION	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	401 CONCAR DRIVE	SAN MATEO
HIGHWAY 92 ON-RAMP	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1915 S. EL CAMINO REAL	SAN MATEO
HILLSDALE AUTO WASH	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3651 SOUTH EL CAMINO REAL	SAN MATEO
HILLSDALE HIGH SCHOOL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3115 DEL MONTE	SAN MATEO
HILLSDALE-NORGE CLEANERS, FORMER	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	3723 SOUTH EL CAMINO REAL	SAN MATEO
HOME MADE RAVIOLI	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	109 SOUTH	SAN MATEO
HONDA OF SAN MATEO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	101 EAST 25TH AVENUE	SAN MATEO
HONDA REPAIR	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1101 SOUTH RAILROAD AVENUE	SAN MATEO
HOWARD TIRE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	521 B	SAN MATEO
HUMBOLDT DISTRIBUTERS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	66 EAST 21ST	SAN MATEO
INVESTEK	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	706 EDGEWOOD	SAN MATEO
IZMIRIAN ROOFING & SHEET METAL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	207 SOUTH CLAREMONT STREET	SAN MATEO
J AND C ONE HOUR CLEANERS	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	111 W. 25TH AVENUE	SAN MATEO
JIFFY LUBE STORE #608	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2517 SOUTH EL CAMINO REAL	SAN MATEO
JW MCCLENAHAN CO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2301 PALM	SAN MATEO
K MART STORE #3595	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1700 SOUTH DELAWARE STREET	SAN MATEO
KENTUCKY FRIED CHICKEN #245	LUST CLEANUP SITE	OPEN - ELIGIBLE FOR CLOSURE	406 EAST THIRD AVENUE	SAN MATEO
KEY INVESTMENT CORP	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	300 NORTH BAYSHORE	SAN MATEO
KUROS PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3790 SOUTH EL CAMINO REAL	SAN MATEO
L C SMITH TRUST	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1620 SOUTH DELAWARE STREET	SAN MATEO

LEWIS PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	353 FRANKLIN	SAN MATEO
LITHOGRAPHIX	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2090 SOUTH DELAWARE STREET	SAN MATEO
LOUIE'S CLEANERS	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	8 17TH AVENUE	SAN MATEO
MAJOR CLEANERS (FORMER)	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	144 WEST 25TH AVENUE	SAN MATEO
MALCOLM PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	625 HURLINGHAM	SAN MATEO
MARINA SHOPPING CENTER	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	2978 SOUTH NORFOLK STREET	SAN MATEO
MB GARAGE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2165 PALM	SAN MATEO
MEDIA MALL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2727 SOUTH EL CAMINO REAL	SAN MATEO
METROPOLITAN APARTMENTS	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	337 TO 440 SOUTH FREMONT	SAN MATEO
MIKE HARVEY TOYOTA, FORMER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	790 NORTH SAN MATEO	SAN MATEO
MILLS HOSPITAL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	100 SOUTH SAN MATEO	SAN MATEO
MOBIL 04-FVK	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	254 EAST HILLSDALE BOULEVARD	SAN MATEO
MOBIL 10-FLN / BP #11196	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	404 EAST 19TH AVENUE	SAN MATEO
MOBIL 10-FTX / BP #11197	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	230 SOUTH EL CAMINO REAL	SAN MATEO
MOBIL 99-MTE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	5 NORTH SAN MATEO	SAN MATEO
MOBIL40-FVW	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3600 SOUTH EL CAMINO REAL	SAN MATEO
MONFREDINI PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	311 PARROT	SAN MATEO
MORISON PROPERTY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	420 WESTMORELAND	SAN MATEO
NATIONAL AUTO SERVICES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4095 PACIFIC	SAN MATEO
NEDWICK & SON	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1028 SOUTH CLAREMONT STREET	SAN MATEO
NOUVEAU CLEANERS, FORMER	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	11 W. 37TH AVENUE	SAN MATEO
OLYMPIC SAN MATEO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2790 SOUTH EL CAMINO REAL	SAN MATEO
PACIFIC BELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3 WATERS PARK	SAN MATEO
PACIFIC INSULATION	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	149 SOUTH	SAN MATEO
PACIFIC READY MIX	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	850 SAN MATEO	SAN MATEO
PALM AVENUE MOTORS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2201 PALM	SAN MATEO
PALM AVENUE PROPERTY	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2142 PALM AVENUE	SAN MATEO
PARKSIDE PLAZA CLEANERS	CLEANUP PROGRAM SITE	OPEN - VERIFICATION MONITORING	1870 S NORFOLK STREET	SAN MATEO
PENINSULA FORKLIFT, FORMER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	850 SOUTH AMPHLETT BOULEVARD	SAN MATEO
PENINSULA GOLF & COUNTRY CLUB	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	701 MADERA	SAN MATEO
PENINSULA REGENT	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1 BALDWIN	SAN MATEO
PET FEED & SUPPLY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1855 SOUTH NORFOLK STREET	SAN MATEO
PETER PAN MOTORS INC.	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2695 SOUTH EL CAMINO REAL	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PRIVATE RESIDENCE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	PRIVATE RESIDENCE	SAN MATEO
PURI PROPERTY	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	20 NORTH RAILROAD AVENUE	SAN MATEO
REGAL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	706 EAST 4TH AVENUE	SAN MATEO
RETAIL BUILDINGS	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	33-43 EAST 3RD AVENUE	SAN MATEO
REVEREND PHEOPHILOS RES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	149 WARREN	SAN MATEO
RIVENDELL III, LTD	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	980 S. CLAREMONT STREET	SAN MATEO

SAMARITAN HOUSE	CLEANUP PROGRAM SITE	OPEN - VERIFICATION MONITORING	1515 SOUTH CLAREMONT STREET	SAN MATEO
SAN MATEO CLEANERS	CLEANUP PROGRAM SITE	OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION	224 EAST HILLSDALE BOULEVARD	SAN MATEO
SAN MATEO COUNTY FAIRGROUNDS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2495 SOUTH DELAWARE STREET	SAN MATEO
SAN MATEO COUNTY HILLCREST JUVENILE FACILITY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	222 PAUL SCANNELL DRIVE	SAN MATEO
SAN MATEO DOWNTOWN TRANSIT CTR	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1ST & NORTH B	SAN MATEO
SAN MATEO FIRE DEPT #27	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1801 DE ANZA	SAN MATEO
SAN MATEO HIGH SCHOOL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	506 NORTH DELAWARE STREET	SAN MATEO
SAN MATEO NISSAN-VOLKSWAGEN	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	800 CONCAR	SAN MATEO
SAN MATEO POLICE DEPT	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2000 SOUTH DELAWARE STREET	SAN MATEO
SAN MATEO RENTALS	LUST CLEANUP SITE	OPEN - ELIGIBLE FOR CLOSURE	1414 EAST 3RD AVENUE	SAN MATEO
SAN MATEO SERVICES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	501 SOUTH NORFOLK STREET	SAN MATEO
SAN MATEO UNION HIGH SCHOOL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	765 EAST POPLAR	SAN MATEO
SAN MATEO UNION HIGH SCHOOL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	991 EAST POPLAR	SAN MATEO
SAN MATEO UNION HIGH SCHOOL DISTRICT TRANSPORTATION YARD	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	991 EAST POPLAR STREET	SAN MATEO
SBC PACIFIC BELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	262 EAST 19TH AVENUE	SAN MATEO
SBC PACIFIC BELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	262 EAST 19TH AVENUE	SAN MATEO
SCANDIA CRAFT UPHOLSTERY	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1120 9TH	SAN MATEO
SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	94 SOUTH EL CAMINO REAL	SAN MATEO
SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1990 SOUTH EL CAMINO REAL	SAN MATEO
SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4140 SOUTH EL CAMINO REAL	SAN MATEO
SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	221 EAST HILLSDALE BOULEVARD	SAN MATEO
SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	221 EAST HILLSDALE BOULEVARD	SAN MATEO
SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1790 SOUTH DELAWARE STREET	SAN MATEO
SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1400 WEST HILLSDALE BOULEVARD	SAN MATEO
SHELL	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	407 SOUTH DELAWARE STREET	SAN MATEO
SHELL (FORMER)/FORMER TOGO'S	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2501 SOUTH EL CAMINO REAL	SAN MATEO
SHELL STATION	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	400 PENINSULA	SAN MATEO
SHELL STATION	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2901 SOUTH NORFOLK STREET	SAN MATEO
SHELL STATION	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	611 EAST 3RD AVENUE	SAN MATEO
SHINOZAKI AUTO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1115 SOUTH RAILROAD AVENUE	SAN MATEO
SHUM PLAZA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2745 SOUTH EL CAMINO REAL	SAN MATEO
SIGNAL OIL STATION, FORMER	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	3717 SOUTH EL CAMINO REAL	SAN MATEO
SKYLAWN MEMORIAL PARK	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	0 CAHILL RIDGE	SAN MATEO
SMB PROPERTIES	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	226 1ST	SAN MATEO
SMCO CORP YARD	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	29 TOWER	SAN MATEO
SOUTH CLAREMONT PROPERTY	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	330 S. CLAREMONT STREET	SAN MATEO
STATION PARK GREEN	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1700 SOUTH DELAWARE STREET	SAN MATEO
STOLLER & SONS INC.	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1150 EAST 19TH AVENUE	SAN MATEO
STONE VILLA INN	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2175 SOUTH EL CAMINO REAL	SAN MATEO
SUNRISE CLEANERS	CLEANUP PROGRAM SITE	OPEN - REMEDIATION	235 BALDWIN AVENUE	SAN MATEO
SUTTON AUTO SALES	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	4075 SOUTH EL CAMINO REAL	SAN MATEO
T. ENDO AUTOMOTIVE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	405 EAST 4TH AVENUE	SAN MATEO
TEXACO #18, FORMER	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2900 SOUTH NORFOLK STREET	SAN MATEO
THE GARAGE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	316 8TH	SAN MATEO
THE TOWERS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	20 WEST 3RD AVENUE	SAN MATEO
TOSCO #30487	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1626 SOUTH EL CAMINO REAL	SAN MATEO
TOSCO #4178	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	615 EAST 3RD AVENUE	SAN MATEO
TOSCO #5427	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	700 POLHEMUS ROAD	SAN MATEO
TRESSER'S TOWING	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	120 SOUTH AMPHLETT BOULEVARD	SAN MATEO
U.S. POSTAL SERVICE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1630 SOUTH DELAWARE STREET	SAN MATEO
UNITED STATES POSTAL OFFICE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1630 SOUTH DELAWARE STREET	SAN MATEO
UNOCAL #0195	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	346 NORTH EL CAMINO REAL	SAN MATEO
UNOCAL #2661	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2800 SOUTH EL CAMINO REAL	SAN MATEO

UNOCAL STATION #3294	LUST CLEANUP SITE	OPEN - REMEDIATION	1626 SOUTH EL CAMINO REAL	SAN MATEO
UNOCAL STATION #3869	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1471 EAST 3RD AVENUE	SAN MATEO
UNOCAL STATION #4211	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1890 SOUTH NORFOLK STREET	SAN MATEO
UNOCAL STATION #6390	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	402 SOUTH DELAWARE STREET	SAN MATEO
USA STATION #212	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3880 SOUTH EL CAMINO REAL	SAN MATEO
VAIL BURNER & OIL CO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1741 LESLIE	SAN MATEO
VICTOR CATANZARO (CHEVRON)	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	727 EAST 3RD AVENUE	SAN MATEO
VILLAGE CLEANERS, FORMER	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	32 37TH AVENUE	SAN MATEO
WARDROBE CLEANERS	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	333 AND 335 EAST 4TH AVENUE	SAN MATEO
WATERS OFFICE PARK	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1, 2, 3 WATERS PARK DRIVE	SAN MATEO
WHEREHOUSE ENTERTAINMENT	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	1934 SOUTH EL CAMINO REAL	SAN MATEO
WISNOMS HARDWARE	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	545 1ST	SAN MATEO

#### ENVIROSTOR

14 EAST 25TH AVE	VOLUNTARY CLEANUP	INACTIVE - ACTION REQUIRED	14 EAST 25TH AVENUE	SAN MATEO
704 NORTH SAN MATEO DRIVE	STATE RESPONSE	ACTIVE	704 NORTH SAN MATEO DRIVE	SAN MATEO
ARAGON HIGH SCHOOL	SCHOOL INVESTIGATION	NO ACTION REQUIRED	900 ALAMEDA DE LAS PULGAS	SAN MATEO
BLUE BIRD CLEANERS	VOLUNTARY CLEANUP	ACTIVE	56 AND 60 WEST 42ND AVENUE	SAN MATEO
BROWNING-FERRIS IND (SAN MATEO LANDFILL)	EVALUATION	REFER: RWQCB	EAST 3RD AVENUE	SAN MATEO
DOWNTOWN SAN MATEO OPPORTUNITY SITES	VOLUNTARY CLEANUP	ACTIVE	400 EAST 5TH AVENUE, 480 EAST 4TH AVENUE	SAN MATEO
FORMER CARL'S CLEANERS	VOLUNTARY CLEANUP	ACTIVE	801 SOUTH B STREET	SAN MATEO
HILLSDALE HIGH SCHOOL	SCHOOL INVESTIGATION	NO ACTION REQUIRED	3115 DEL MONTE STREET	SAN MATEO
HUMBOLDT SQUARE	VOLUNTARY CLEANUP	REFER: LOCAL AGENCY	304 - 316 S. HUMBOLDT STREET	SAN MATEO
M & M ONE HR MARTINIZING	EVALUATION	REFER: OTHER AGENCY	1464 CARY AVE	SAN MATEO
NEW COMMUNITY SCHOOL	SCHOOL INVESTIGATION	NO ACTION REQUIRED	POLHEMUS ROAD	SAN MATEO
NEW NORTH CENTRAL ELEMENTARY SCHOOL	SCHOOL INVESTIGATION	ACTIVE	715 INDIAN AVENUE	SAN MATEO
ONE HR. DRY CLG. MARTINIZING	EVALUATION	REFER: OTHER AGENCY	111 WEST 25TH AVENUE	SAN MATEO
PACIFIC READY-MIX	EVALUATION	REFER: OTHER AGENCY	850 NORTH SAN MATEO DRIVE	SAN MATEO
PARKSIDE PLAZA CLEANERS	EVALUATION	REFER: OTHER AGENCY	1870 SOUTH NORFOLK ST.	SAN MATEO
PROMETHEUS DEVELOPERS - BAYSHORE EXEC PK	EVALUATION	REFER: OTHER AGENCY	92ND & SOUTH NORFOLK	SAN MATEO
PURI PROPERTY	EVALUATION	REFER: 1248 LOCAL AGENCY	20 NORTH RAILROAD AVENUE	SAN MATEO
R NU IT CLEANERS	EVALUATION	REFER: OTHER AGENCY	200 EAST SECOND AVENUE	SAN MATEO
ROYALE RUG & DRAPERY CLEANING	EVALUATION	REFER: OTHER AGENCY	850 N. DELAWARE	SAN MATEO
SAN MATEO HIGH	SCHOOL INVESTIGATION	NO ACTION REQUIRED	506 NORTH DELAWARE STREET	SAN MATEO
SHOREVIEW COLLECTION	VOLUNTARY CLEANUP	NO FURTHER ACTION	220 NORTH BAYSHORE BLVD..	SAN MATEO
STEVEN'S CAR CAPITAL	EVALUATION	NO FURTHER ACTION	815 WOODSIDE WAY	SAN MATEO
SUNRISE CLEANERS	EVALUATION	REFER: OTHER AGENCY	233 BALDWIN AVE	SAN MATEO
TOP HAT CLEANERS	EVALUATION	NO ACTION REQUIRED	368 N ELLSWORTH AVE	SAN MATEO
VILLAGE CLEANERS	VOLUNTARY CLEANUP	ACTIVE	32 37TH AVENUE	SAN MATEO
WARDROBE CLEANERS	EVALUATION	NO ACTION REQUIRED	344 4TH AVE	SAN MATEO



